

Galaxy

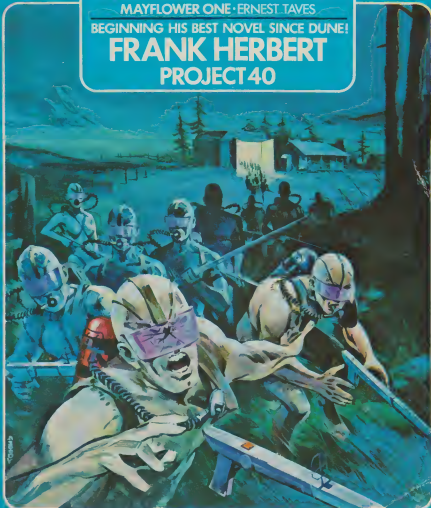
MAGAZINE

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ALL STORIES NEW
November-December 1972
Vol. 33, No. 3

Galaxy

SCIENCE FICTION

MAGAZINE

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NELSON

The Day the Sun Stood Still

Three Original Novellas of Science Fiction

By POUL ANDERSON, GORDON R. DICKSON, and
ROBERT SILVERBERG

FOREWORD BY LESTER DEL REY



Faith wasn't enough. Maybe it should have been, but it wasn't. And when science didn't find any reason to suppose the world was more than atoms and chance, humanity started slipping back into chaos. The world needed a sign — scientific proof, the only sign it could accept — that God lived. Then suddenly, as in biblical times, the sign was there: "... for a day and a night . . . the earth moved not around the Sun, neither did it rotate."

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DIRECTIONS

Directions (infinite):

By its "narrowest and hardest" definition, Dr. Isaac Asimov informs us, "science fiction is that branch of literature which deals with the future of science and scientists" (*Galaxy*, May '72). And that is why *The Gods Themselves*, so promising in title and opening chapters, ended as such a disappointment. Because the future of scientists and what they do is not a very exciting subject matter for fiction. What provides the real provocative depths are the implications of what scientists do and the reasons for their doing it. And since it is the chosen goal, basically, of scientists to unravel the mystery of existence, how can any definition of science fiction possibly be "narrow" or limiting?

Thus the Cy Chauvin debate begun in *Galaxy*, March '72, rages on. What is science fiction? What are its distinguishing characteristics? Good questions, these. And they imply concomitant questions on the nature of all writing, of all art—of life itself.

The trick, I think, is the articulation of what life expresses to us, and of that articulation art is the epitome. Science fiction, or speculative fiction, is a fore-

grounded art form, not asking for a definition but rather displaying its credentials—a license rather than a limit. And as science is today our most effective vehicle into the unknown, why should speculative fiction deny itself a foremost position in the exploration of the great mystery on its own?

Some might object that the above can only be made acceptable by excluding the reality which is the object of science. But I submit that the impossibility of the existence of the square root of two does not exclude the existence of the number two. I submit that Einstein's theory of relativity does not exclude the continued functioning of the universe as men have always known it.

In speculative fiction lies the greatest possibility for reawakening that sense of awe of the cosmos, of wonder at the priceless gem that is ours for free. Where science may seek to deny the perpetual mystery that lies always just beyond the range of microscope and telescope alike, speculative fiction must seek it out. It is when U becomes U' and the square root of two entwines with the infinite that the mystery buds, the universe blossoms and science becomes science fiction.

We are a society founded on and floundering in science and technology. We seek to fill a gap the existence of which we deny and the denial leaves an emptiness. At the bottom of this emptiness smolders a spark—call it whatever you wish.

The unknown? It seems to me that science fiction can hardly avoid the challenge of fanning it to flame.

And why should it want to avoid that challenge?

Stephen Emmel
Syracuse, N. Y.

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The following has come often to my mind, but especially after reading Isaac Asimov's novel and Cy Chauvin's letter in the March '72 issue of *Galaxy*. We live in a technological and an increasingly science-oriented period. People are involved in science-fictional situations more and more because that is the nature of our times. In that respect perhaps science fiction is today's mainstream, or should be. But to be good science fiction it must be plausible, able to suspend disbelief, seem real and well within the limits of possibility.

I agree somewhat with Cy Chauvin, but not entirely. In the case of Compton's Chronocules—atom bombs may seem like old hat and mainstream now, but they still represent a scientific discovery. About the only one of Chauvin's choices to exclude as sf I agree on is Disch's *The Asian Shore*. And, of course, besides containing a science element a science fiction story should be good writing—of this *Slow Sculpture*, I think, was a good example.

But I couldn't help simply rejoicing and shouting Yes! Yes! when I read Asimov's *The Gods Themselves*.

Glenn Chang
Evanston, Ill.

Galaxy will pay \$10 for a lead letter and \$5 each for other letters published in *Directions*. Address correspondence intended for this department to: *Directions*, Galaxy Magazine, 235 E. 45th Street, New York N.Y. 10017.

THE NAKED DREAM

Editor's Column

With classic application of the best principles of science fiction, Frank Herbert—in a great new serial, *Project 40*, starting in this issue—puts man under the same kind of microscope man usually reserves for other life forms. The novel, in fact, picks up where a currently popular movie documentary on insect life, *The Hellstrom Chronicle*, leaves off—replacing bugs with people. New insights guaranteed.

And they're sorely needed. For we are never naked to each other.

Or even, it seems, to the stars. I don't know how you felt when you saw the press reproductions (some were censored to protect your ignorance) of the gold-plated but otherwise nude man/woman figures Pioneer 10 is carrying on its timeless journey to introduce humans to starfolk. My own reaction was that they failed to represent humans I know—ninety per cent of whom are fatter, thinner, taller, shorter or otherwise differently shaped and none of whom would dream of appearing naked or unarmed at least with insect spray before an alien life form.

Now it seems they may also represent nobody you know. In a by-lined story *Wall Street Journal* staff writer Jerry E. Bishop cites NASA authority as admitting that while the gentleman in Pioneer 10 is depicted as anatomically complete the lady is not—suggesting that these two are the very last humans.

A prophecy? Or to protect whose ignorance out there?

—JAKOBSSON

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PART ONE



I

Words of the Brood Mother, Trova Hellstrom: I welcome the day when I will go into the vats and become one with all of our people. (dated October 26, 1896)

THE man with the binoculars squirmed forward on his stomach through the sun-warmed brown grass. There were insects in the grass and he did not like insects, but he ignored them and concentrated on reaching the oak shadows at the hillcrest with a minimum disturbance of the growth that concealed him even while it dropped stickers and crawling things on his exposed skin.

His narrow face, swarthy and deeply seamed, betrayed his age—fifty-one years—but the hair, black

and oily, that poked from beneath his khaki sunhat belied these years. So did his movements, quick and confident.

At the hillcrest he drew several deep breaths while dusting the binocular lenses with a clean linen handkerchief. He parted the dry grass then, focused the binoculars and stared through them at the farm that filled the valley below the hill. The haze of the hot autumn afternoon complicated his examination as did the binoculars, a pair of ten-sixties of special manufacture. He had trained himself to use them the way he fired a rifle—hold breath, concentrate on rapid scanning with only eye movements, keeping immobile the expensive instrument of glass and metal that brought distances into such immediate detail.

The farm under his amplified gaze was oddly isolated. The valley

In the battle for
survival, will man outlast
the life he destroys

PROJECT 40

FRANK HERBERT



was about a half-mile in length, perhaps five hundred yards wide, narrowing at the upper end where a thin trickle of water spilled down a black rock face. The farm buildings occupied cleared ground on the far side of a narrow stream whose meandering, willow-bordered bed was only a thin reminder of its spring affluence. Patches of wavering green moss marked the stream's rocks and there were a few shallow pools where water appeared not to flow at all.

The buildings sat back from the stream. They were a cluster of weathered boards and blind glass at rustic variance with the neatness of harvested plantings that ran in parallel rows within cleanly squared fencelines over the rest of the valley. There was the house, its basic unit in the old saltbox pattern, but with two added wings. A bay window featured the wing near-

est the creek. To the right of the house was a large barn with big doors on the second level and an upjutting cupola arrangement along its ridgeline—no windows there, but louvered ventilators were spaced along its entire length and at the visible end. On the hill behind the barn stretched a decaying feed shed. A smaller building could be an old outhouse. Another small wooden structure stood higher on the hill behind the farmhouse, possibly an old pump building. Down by the higher main fence at the valley's northern end squatted a concrete block about twenty feet on a side and with flat roof—new pump house was the guess, but it looked like a defensive blockhouse.

The watcher, whose name was Carlos Depeaux, made a mental note that the valley fitted the descriptions. It was full of default

messages. No people stirred about on the land (although a distinctly audible and irritating machinery hum issued from the barn). No road ran from the north gate to the farm buildings (the nearest road, a one-way track, reached the valley from the north but ended at the gate beyond the blockhouse). A footpath with narrow indentations, apparently from a wheelbarrow, stretched from the gate to the farmhouse and barn.

The valley's sides were steep and in places almost craggy with brown rock outcroppings at the top of the far side. A similar rocky upthrust rose about a hundred feet to Depeaux's right. A few animal tracks wound their dusty ribbons through oak and madrona along the valley sides. The black rock of the tiny waterfall closed off the southern end where a thin cinnamon tracery of water spilled into the stream. The land undulated away out of the valley northward, widening into pasture meadows and occasional clumps of pine intermingled with oak and madrona. Cattle grazed in the far distance and, although there were no fences immediately outside the farm's barrier, tall grass revealed that the cattle did not venture too near this valley. That, too, accorded with the reports.

HAVING satisfied himself that the valley still matched its descriptions, Depeaux wriggled backward behind the crest, found a shaded patch beneath an oak. There he turned to lie on his back and brought a small knapsack into a position where he could explore

its interior. He knew his clothing would blend well with the grass, but he still hesitated to sit up, preferring to wait and listen. The sack contained his binocular case, a well-thumbed copy of *Naming The Birds At A Glance*, a good 35 mm camera with a long lens, two thin beef sandwiches wrapped up in plastic, an orange and a plastic bottle of warm water.

He brought out a sandwich, lay for a moment staring up through the oak's branches, his pale gray eyes not really focused on anything in particular. Once he pulled at the black hairs protruding from his nostrils. The situation was extremely odd, he thought. Here it was mid-October and the Agency still had not been able to observe the farmers in that valley through an entire harvest. The crops had been harvested, however. That was obvious at a glance. Depeaux was not a farmer, but he thought he recognized the stubby remains of corn plantings, although the stalks had been removed.

Why had they cleared away the stalks? He wondered. Other farms he had seen in the long drive to this valley were still littered with harvest remains. He wasn't sure, but he thought this was another default message in the valley that interested his Agency so much. The uncertainty, the gap in his knowledge—bothered him, however, and he made a note to check on this. Did they burn the stalks?

Presently, sensing no watchers around him, Depeaux sat up, his back against the oak's bole, ate the sandwich and drank some of the warm water. The food was the

first he had allowed himself since before daylight. He decided to save the orange and other sandwich for later. His approach to this vantage point from the place far back in the encroaching pines where he had concealed his bicycle had been long and slow. The van and the stakeout where he had left Tymiena were another half-hour's bicycle ride beyond the cache. He had decided not to venture back before nightfall and knew he was going to be very hungry before he got back to the van. Not the first time on such a job. The peculiar nature of this case had become increasingly obvious the nearer he had come to the farm. Well—he'd been warned about that. Stubborn persistence had kept him pressing forward past the imaginary hunger line he knew he would have to pass on the return. The countryside was much more open and empty of concealment than he had expected from the aerial photos, although Porter's reports had made specific mention of this. Depeaux had expected to approach from a different direction, however, and find his own cover. But there had been, finally, only the tall brown grass to conceal his stalking climb across a wide pastureland and up to the hill.

The sandwich finished and half his water gone, Depeaux sealed the bottle, restored it and the rest of the food to his pack. For a moment he peered along his backtrail to see if anyone had followed. He saw no sign of anyone, but was unable to put down an uneasy feeling that he was watched. The

lowering sun was picking up his trail with a shadowline, too. No helping that—the crushed grass was a track that could be traced.

He had driven through the town of Fosterville at 3 A. M., curious about the sleeping community where, he was told, they generally refused to answer questions about the farm. There had been a new motel on the outskirts and Tymiena had suggested they spend a night there before reconnoitering the farm, but Depeaux was playing a hunch on this case. What if there were watchers from the farm in the town to report the arrival of strangers.

The Farm.

It had been capitalized in all the Agency's reports for some time, for quite a while before Porter had turned up missing. Depeaux had driven on to a turn-off several miles below the valley and had left Tymiena there shortly before dawn. Now he was a birdwatcher, but no birds were visible.

Depeaux returned to the gap in the grass and had another look into the valley. There had been a massacre of Indians here in the late 1860's—farmers killing off the remnants of a "wild" tribe to remove a threat to grazing stock. As a marker of that all-but-forgotten day the valley had been named "Guarded." According to a historical footnote Depeaux had located, the original name of the valley had been Running Water, after the Indian name. Generations of white farming, however, had depleted the water table and now the Running Water did not run year round.

As he studied the valley now, Depeaux thought about the record of human nature carried in such names. A casual observer passing this way without doing his homework might think the valley had achieved its name because of its setting. Guarded Valley was a closed-in place with only one real avenue of easy access apparent. The hillsides were steep. A cliff marked the upper end. Only to the north did it open out. Appearances could be deceptive, though, Depeaux reminded himself. He had reached his vantage point successfully and his binoculars might just as well have been a weapon for violence. In a sense they were a subtle weapon aimed at the destruction of Guarded Valley.

For Depeaux that pattern of destruction had begun when Joseph Merrivale, the Agency's operations director, had called him in for an assignment conference. Merrivale, a native of Chicago who affected a heavy English accent, had begun by grinning at Carlos and saying: "You may have to waste a few of your fellow humans on this one."

They all knew, of course, how much Depeaux hated personal violence.

From Hellstrom's Hive Manual: The significant evolutionary advance that the insects achieved more than 100 million years ago was the reproductive neuter. This fixed the colony as the unit of natural selection and removed all previous limits on the amount of specialization (expressed as caste

differences) a colony could tolerate. It is clear that if we vertebrates can take the same route our individual members with their vastly larger brains will become incomparably superior specialists. No other species will be able to stand against us, ever—not even the old human species from which we will evolve our new humans.

THE short man with the deceptively youthful face listened attentively as Merrivale briefed Depeaux. It was early on a Monday morning and the short man, whose name was Edward Janvert, had been surprised that an assignment conference could be called that early on such brief notice. He suspected trouble somewhere in the Agency.

Janvert, who was called Shorty by most of his associates and who managed to conceal his hatred of the name, was only four feet nine inches tall and had passed as a teenager on more than one Agency assignment. The furniture in Merrivale's office was never small enough for him, however, and he was squirming on a big leather chair within a half hour.

The case was subtle, Janvert observed presently, the type he had learned to distrust. The target was an entomologist, a Dr. Nils Hellstrom, and it was clear from Merrivale's careful choice of words that Hellstrom had friends in high places. There were always so many toes around to be avoided in this business. You couldn't separate politics from the Agency's

version of a traditional security investigation. And the investigations inevitably took on economic overtones.

When he had called in Janvert Merrivale had said only that it was necessary to keep a second team in reserve for possible assistance in this case. Someone had to be ready to step in at a moment's notice.

They expect casualties, Janvert told himself.

He glanced covertly at Clovis Carr, whose almost boyish figure was dwarfed in another of Merrivale's big wing chairs. Janvert suspected Merrivale had decorated the office to give it the air of an expensive British club, something to go with his bogus accent.

Do they know about Clovis and me? Janvert's attention wandered under the onslaught of Merrivale's rambling style. To the Agency love was a weapon to be used whenever it was needed. Janvert tried to hold his gaze from Clovis, but he kept glancing back at her in spite of himself. She was short, only a half-inch taller than he, a wiry brunette with a pert oval face and a pale northern complexion that burned at the drop of a sunbeam. There were times when Janvert felt his love for her as an actual physical pain.

Merrivale was describing what he called "Hellstrom's cover," which turned out to be the making of documentary films about insects.

"Deucedly curious, don't you think?" Merrivale asked.

For not the first time during his four years in the Agency Janvert wished he were out of it. He had come in while a third-year law

Ballantine Books

THERE'S been a lot of pootling around lately (remember this is being written in the lovely month of June which this year, they tell me, is just ghastly for Libras—that's us). So let's get back to what is really important—namely our list which, since Fall is coming up (campus openings and all like that), is always bonenze time for publishers. So we tell ourselves.

• • •

SO. Lin Carter has a fresh anthology GREAT SHORT NOVELS OF ADULT FANTASY (a preview of things to come) and we are also publishing James White's LIFEBOAT (you saw part of it first in Galaxy as DARK INFERNO—a title which still baffles us). Anyway, it's a tension-filled rescue in space, done with all this author's famous attention to authentic detail. Plus, we are reissuing his other splendid rescue story—THE WATCH BELOW. Don't miss!

• • •

WE HAVE a couple of natural foods cookbooks for them that's interested —200 REALLY GREAT NATURAL FOODS RECIPES (that's laying it on the line) plus THE COMPLEAT YOGURT COOKBOOK. Then in October, that lovely month, Bob Silverberg's ALPHA THREE. The good ones get better all the time.

• • •

AND the Gerrold is back with WHEN HARLIE WAS ONE (Book Club, too

—pretty nice) pieces of which first
sew the light of day in *Galaxy*. This
one is really superb computer stuff.
We mean it's good. A contender,
without doubt. But it's Gerrold, and
you don't really need to know more
than that. Also a reissue of that Adult
Fantasy favorite **VOYAGE TO ARC-
TURUS**. And watch Harper's list for
THE SHEEP LOOK UP, by John
Brunner—probably a November publi-
cation. This is his major work to follow
STAND ON ZANZIBAR.

• • •

*WE HAVE a pricing policy which is
very unpopular with this department—
to wit, a buck-twenty-five for original
stuff, but still trying to hold the line at
95¢ for reissues. Of course when it
comes to books like **ZANZIBAR** and
THE SHEEP, we go soaring. We'd
suggest a boycott except you'd all
be missing so much fun. Well, boycott
someone else. What the hell!*

• • •

*A WISTFUL NOTE: It's getting lonely
here in the excited East, what with
the Silverbergs and everyone (at least
it seems like everyone) taking off to
actually live in California. So, write
already! Harlan, that means you! No
pun intended.* BB

• • •

*HEY, one thing more. All you Tolkien
fans—there's a delicious Tolkien
Calendar out, with reproductions of
the Professor's own art. He seemed
delighted with it when we met him
on our recent London trip. Happy
1973...*

student working the summer as a
clerk in the Justice Department.
In that capacity he had found a file
folder left accidentally on a table
of his division's law library.
Curious, he had glanced into the
file and had found a highly touchy
report on a translator in a foreign
embassy.

His first reaction at the file's
contents had been a kind of sor-
rowful outrage that governments
still resorted to such forms of
espionage. Something about the
file had told him it represented
complex operation of his own
government.

Janvert had come up through the
'campus unrest' period into the
study of law. He had seen the law
at first as a possible way out of the
world's many dilemmas, but the
vision had proved a will-o'-the-
wisp. Pursuit of the law had
taken him into that library with its
damnable misplaced file folder.
One thing had led inevitably to
another, just as it always did,
without a completely defined
cause-and-effect relationship. The
immediate thing, however, was
that he had been caught reading
the file by its owner.

What followed was curiously
low key. There had been a period
of pressures, some subtle and some
not quite subtle, designed to
recruit him into the Agency which
had produced that file. Janvert
came from a good family, they ex-
plained. His father was an impor-
tant small businessman (owner-
operator of a small-town hardware
store). At first the recruitment had
been vaguely amusing.

Then the pay offers (plus ex-

penses) had climbed embarrassingly high and he had begun to wonder. Next had come startling praise for his abilities and aptitudes, which Janvert had suspected the Agency invented on the spur of the moment—he had had difficulty seeing himself in their descriptions.

Finally the gloves had come off. He had been told pointedly that he might find other government employment difficult to obtain. This had almost put his back up, because it was common knowledge that he had set his sights on the Justice Department. In the end he had said he would try it for a few years if he could continue his law education. By that time he had been dealing with the Chief's right hand man, Dzule Peruge, and Peruge had evinced profound delight at this prospect.

"The Agency needs men with legal training," Peruge had said. "We need them desperately at times."

Peruge's next words had startled Janvert.

"Has anyone ever told you that you could pass for a teenager? That could be very useful at times, especially for someone with legal training." This last had come out with all of the overtones of an afterthought.

The facts were that Janvert had always been kept too busy to complete his valuable legal training. *Maybe next year, Shorty. You can see for yourself how crucial your present case is. Now, I want you and Clovis...*

That had been how he had first met Clovis, who also possessed that

useful appearance of youth. Sometimes she had been his sister. At other times they had been runaway lovers whose parents "didn't understand."

The realization had come rather slowly to Janvert that the file he had found and read was more sensitive than he had imagined and that a probable alternative to his joining the Agency had been a markerless grave in some southern swamp. He had never participated in a *swamping*, as Agency old timers put it, but he knew for a fact that they occurred.

That was how it was in the Agency, he learned.

The Agency.

NO ONE ever called it anything else. The Agency's economic operations—the spying and other forms of snooping—only confirmed Janvert's early cynicism. He saw the world without masks, telling himself that the great mass of his fellows had no realization whatsoever that they already lived in what was, for all intents and purposes, a police state. This had been inevitable from the formation of the first police state that achieved any degree of world power. The only apparent way to oppose the trend was by pitting it against itself. It was a condition which fostered its mimic forces on all sides (so Clovis Carr and Edward Janvert agreed). Everything in the society they saw took on police-state character. Janvert said it: *This is the time of the police states.*

They made this a tenet of their

pact to leave the Agency together at the first opportunity. That their feelings for each other and the pact were dangerous, they had no doubts. To leave the Agency would require new identities and a subsequent life of obscurity whose nature they understood all too well. Agents left their service through death in action or a carefully guarded retirement—or they simply disappeared and somehow all of their fellows got the message not to ask questions. The most persistent retirement rumor in the Agency mentioned a carefully supervised rest home no one located with precise geography. Some said northern Minnesota. The story described high fences, guards, dogs, golf, tennis, swimming, splendid fishing on an enclosed lake, posh private cabins for guests—and even quarters for married couples, but no children. Having children in this business was considered equal to a death sentence.

Both Carr and Janvert agreed they wanted children. Escape would have to occur while they were overseas together, they decided. Forged papers, new faces, money, the requisite language facility—all the physical necessities were within their reach except one: the opportunity. And never once did they suspect adolescent fantasy in such dreams or in the work that occupied their lives. They would escape—some day.

Depeaux was objecting to something in Merrivale's briefing now. Janvert tried to pick up the thread—something about a young woman trying to escape from the farm.

"Porter's reasonably certain they didn't kill her," Merrivale said. "They just took her back inside that barn which—we are told—is the main studio for Hellstrom's movie operation."

II

From the Agency report on Project 40: The sheaf of papers was dropped from a folder by a man identified as a Hellstrom aide. The incident occurred in the MIT main library early last March as explained in the covering notes. The label PROJECT 40 was at the top of each page. From an examination of the notes and diagrams (see enclosure A), our experts postulate developmental plans for what they describe as "a toroidal field disrupter." This is explained as an electron (or particle) pump capable of influencing physical matter at a distance. The papers are unfortunately incomplete. No definite line of development can be determined from them, although our own laboratories are exploring the provocative implications. It seems obvious, however, that someone in the Hellstrom organization is at work on an operational prototype. We cannot be certain 1) whether it will work or 2) to what use it will be put if it works. However, in view of Dr. Zinstrom's report (see enclosure G) we must assume the worst. Zinstrom assures us privately that the theory behind such a development is

sound and that a toroidal field disrupter large enough, amplified enough to set to the correct resonance could shatter the Earth's crust with disastrous consequences for all life on our planet.

"THIS is really a plum of a case we're handing to Carlos," Merrivale said. He touched his upper lip, brushing an imaginary mustache.

Carr, who was seated slightly behind Depeaux and facing Merrivale, noted the flush of sudden red at Depeaux's neck. He didn't like that obvious, pandering statement. The morning sun was shining through the window to Merrivale's right, reflecting from the desk. The yellow-brown underlight imparted a saturnine cast to the operations chief's face.

"That movie company front has got Peruge's wind up, I must say," Merrivale said. (Depeaux actually shuddered.)

Carr coughed to conceal a sudden hysterical desire to laugh aloud.

"Under the circumstances, we don't dare go in and root them out, as I'm sure you can understand," Merrivale said. "Not enough evidence in our kip. Your job, that. This movie front does offer one of our most promising points of entry, however."

"What's the subject matter of this film?" Janvert asked.

They all turned to look at him and Carr wondered why Eddie had interrupted. He seldom did that sort of thing casually. Was he fishing for some information behind Merrivale's briefing?

"I thought I said," Merrivale sniffed. "Insects. They're doing a film about bloody insects. A bit of a surprise, that, when Peruge first mentioned it. I confess my own first guess was that they were making these unsavory sex films and—ah—blackmailing someone in a sensitive position."

Depeaux, sweating under a profound aversion to Merrivale's bogus accent and manner, squirmed in his chair, resenting the interruption. *Get on with it!* he thought.

"I'm not sure I understand the sensitive conditions around Hellstrom's operation," Janvert said. "I thought the film would supply a clue."

Merrivale sighed. *Bloody nit-picker.* He said, "Hellstrom is something of a madman on the subject of ecology. I'm sure you know how politically sensitive that area is. There's also the fact that he is employed as a consultant by several—I repeat, several—persons of extremely powerful influence. I could name one Senator and at least three Congressmen. If we were to move frontally against Hellstrom, I'm sure the repercussions would be severe."

"Ecology, eh?" Depeaux said, trying to get Merrivale back on track.

"Yes, ecology." Merrivale made the word sound as though he wanted it to rhyme with sodomy. "Man has access to considerable sums of money, too, and we'd like to know about that."

Depeaux nodded, said, "Let's get back to that valley."

"Yes, yes indeed," Merrivale

agreed. "You've all seen the map. This little valley's been in Hellstrom's family since his grandmother's day. Trova Hellstrom, pioneer, widow, that sort of thing."

Janvert rubbed a hand across his eyes. He was sure from Merrivale's description of Trova Hellstrom that the intended picture was of a tiny "widow woman" fighting off attacking redskins from a blazing log cabin, her brats forming a bucket brigade behind her. The man was unbelievable.

"Here's the map," Merrivale said, extracting it from the papers on his desk. "Southeastern Oregon, right here." He touched the map with a finger. "Guarded Valley. The closest civilization is this town here with the unlikely appellation of Fosterville." His finger moved to the unlikely town.

CARR wondered: *Why an unlikely name?* She glanced covertly at Janvert, but he was examining the palm of his right hand as though he had just found something fascinating in it.

"And they do all of their filming in this valley?" Depeaux asked.

"Oh, no," Merrivale protested. "My God, Carlos, didn't you read enclosures R through W?"

"There were no such enclosures in my file," Depeaux said.

"Bloody hell!" Merrivale said. "Sometimes, I wonder how we ever get anything done correctly in this establishment. Very well. I'll give you mine. Briefly, Hellstrom and his camera crews and whatnot have been all over the bloody world: Kenya, Brazil, Southeast Asia, India—it's all in

here." He tapped the papers on his desk. "You can see for yourself later."

"And this Project Forty," Depeaux prompted.

"That's what attracted our attention," Merrivale explained. "The pertinent papers were copied and the originals returned to where they were found. The Hellstrom aide subsequently returned for his papers, found them where he expected, took them and departed. Their significance was not understood at the time. Purely routine. Our man on the library staff was curious, no more, but our curiosity became increasingly intense as the papers were bounced upstairs. Unfortunately we've not had the opportunity of observing this particular Hellstrom aide since that moment. He apparently is keeping to the farm. It is our belief, however, that Hellstrom is unaware that we know about his little project."

"The speculation seems a little science fictiony—perhaps a little fantastic," Depeaux said.

Janvert nodded his agreement. Were those explicit suspicions the real reason the Agency was prying into Hellstrom's affairs? Or was it possible that Hellstrom was merely developing a product that threatened one of the groups that actually paid most of the Agency's expenses? You never knew in this business.

"Haven't I heard of this Hellstrom before?" Carr asked. "Isn't he the entomologist who came out against DDT when—"

"That's the chap," Merrivale said. "Pure fanatic. Now, here's

the farmstead plan, Carlos."

So much for my question, Carr thought. She curled her legs under her in the wing chair, glanced openly at Janvert, who returned her stare with a grin. *He's just been playing with Merrivale*, she realized, *and he thinks I'm in the game.*

MERRIVALE had a blueprint map on his desk now, was unfolding it, indicating features on it with his long, sensitive fingers. "Barn here—outbuildings—main house. We have every reason to believe, as those reports indicate, that the barn is Hellstrom's studio. Curious concrete structure here near the entrance gate. Can't say what purpose it serves. Your job to find out."

"And you don't want us to go right in, nose around," Depeaux said. He frowned at the blueprint map. This decision puzzled him. "The young woman who tried to get away—"

"Yes, that was February twentieth last," Merrivale said. "Porter saw her run from the barn. She got as far as the north gate here when she was apprehended by two men who came upon her from beyond the fence. Their point of origin was not determined. They did, however, return her to the barn-studio."

"Porter's account says these people weren't wearing any clothes," Depeaux said. "It seems to me that a report to the authorities giving a description of—"

"And we'd have had to explain why we were there, send our one man up against numerous Hell-

strom accomplices, all of this in the presence of the "new morality" that permeates this society."

You damned hypocrite, Carr thought. *You know how the Agency uses sex for its own purposes.*

Janvert leaned forward in his chair. "Merrivale, you're holding something back in this case. I want to know what it is. We have Porter's report, but he's not here to amplify it. Is Porter available?" He sat back. "A simple yes or no will suffice."

That's a dangerous tack to take, Eddie, Carr thought. She watched Merrivale intently to measure his response.

"I can't say I care for your tone, Shorty," Merrivale said.

Depeaux leaned back, put a hand over his eyes.

"And I can't say I care for your secrecy," Janvert said. "We would like to know the things that are not in these reports."

Depeaux dropped his hand, nodded. *Yes, there were some things about this case . . .*

"Impatience is not seemly in good agents," Merrivale said. "However, I can understand your curiosity and the 'need-to-know' rule has not been applied in this case. Peruge was specific on that. What has our wind up, as it were, is not just this Project Forty thing, but the accumulation of items, the indications that Hellstrom's film activities are actually—" he pronounced it *exshooly* and once more for emphasis—"actually a cover for serious and highly subversive political activities."

Bullshit, Janvert thought.

"How serious?" Carr asked.

"Well—Hellstrom has been nosing around the Nevada atomic testing area. He conducts entomological researches, as well, you see. His films are offered under the guise of documentary productions. He has had atomic materials for his so-called researches and—"

"Why so-called?" Janvert asked. "Isn't it possible he's just what he—"

"Impossible." Merrivale snorted. "Look, it's really all in the reports here. Observe especially the indications that Hellstrom and his people may be interested in forming some sort of new communal society. It's quite provocative. He and his film crew live that sort of life wherever they go—off to themselves, clubby. And their preoccupation with the emerging African nations, the numerous visits to the Nevada testing area, the ecology thing with its highly inflammatory nature, the—"

"Communist?" Carr interrupted.

"It's—ah—possible."

Janvert asked, "Where's Porter?"

"That—ah—" Merrivale pulled at his chin. "That's a bit sticky. I'm sure you understand the delicacy of our position in all of—"

"I don't understand it," Janvert said. "What's happened to him?"

"That's one of the things we hope Carlos can ascertain," Merrivale said.

Depeaux turned a speculative look on Janvert, returned his attention to Merrivale, who had sunk back into apparent concentration upon the blueprint map.

"Porter's missing?" Depeaux asked.

"Somewhere around this farm," Merrivale said. He looked up as though he were just noticing Depeaux. "Presumably."

From recorded comments of Brood Mother Trova Hellstrom: Some threat is good for a species. It tends to stimulate breeding, to raise the level of awareness. Too much, however, can have a stupefying effect. It is one of the tasks of Hive leadership to adjust the level of stimulating threat.

AS THE sun moved lower behind him and to the right of his position on the hill above Guarded Valley, Depeaux took care that the light did not outline him. There were both advantages and disadvantages in the slanting rays. They tended to throw some details of the farm into relief—the fence lines, the paths on the opposite hillside, the weathered boards on the barn's western face.

He still had not seen one sign of human activity outside the buildings and no sure indication of humans within them. The irritating hum continued to issue from the barn and Depeaux had exhausted his speculations on what it might be. He had opted tentatively for air-conditioning and wished he could enjoy that relief from the hot afternoon in the dusty grass.

A long, cold drink—that's what I need, he told himself.

The fact that the farm fitted all the reports and the descriptions (including Porter's) did not really say anything for it.

Depeaux scanned the valley once

more through his binoculars. There was a peculiar waiting air to the emptiness of the place, as though forces were being marshaled to fill the farm with life.

What did Hellstrom do with his farm's products? Depeaux wondered. Why was the entire area so devoid of human activity? He had seen no vacationers or picnickers on the dirt road to the valley—although the area seemed attractive enough. Why were the Fosterville residents so close-mouthed about Hellstrom's farm? Porter had been intrigued by this, too. This was a hunting area, but Depeaux had seen no deer sign and not one hunter. The stream obviously held no attraction for fishermen.

A Steller's jay flapped into the tree behind Depeaux, called once with its raucous voice, then flew across the valley into the trees of the far slope.

Depeaux watched the bird's flight with peculiar interest, realizing it was the first higher life form he had seen in Hellstrom's valley. One damned jay! That was some record for a day's work. But he supposed to be a birdwatcher, wasn't he? Just a simple little old vacationer, a traveling salesman for the Blue Devil Fireworks Corporation of Baltimore, Maryland. He sighed, worked his way back to the oak's shade. He had studied the maps, the aerial photographs. Porter's descriptions, all the accumulated reports. Every detail had been committed to memory. He scanned his backtrail with the binoculars. Nothing moved in the tall grass of the open area or in the trees beyond it.

Nothing. The oddity of this became increasingly demanding of his attention.

One damned jay?

It had been a thing long inserting itself into his awareness, but now he focused upon it to the exclusion of all other considerations. One bird. It was as though animal life had been swept away from the region around Guarded Valley. Why hadn't Porter mentioned that? And the grazing cattle down there to the north toward Foster-ville. No fence kept them from approaching the farm, but they kept their distance.

Why?

In that instant Depeaux recognized what it was that had made the farm's fields appear so strange to him.

They were clean.

Those fields had not been harvested. They had been swept clean of every stalk, every leaf, every twig. An orchard occupied the upper reaches of the valley and Depeaux crawled back to study it through the binoculars. There were no bits of rotten fruit on the ground, no culls, no leaves or limbs—nothing.

Clean.

But the tall grass remained all around on the perimeter hills.

Hellstrom's own addenda to the dietary notes: The key workers must, of course, take the supplemental leader-foods without fail, but it is equally important that they keep up their intake from the vats. It is here that we get the markers that maintain our awareness of

mutual identity. Without this chemical sameness, which the vats provide us, we will become like those Outside: isolated, alone, drifting without purpose.

BY LATE afternoon Depeaux had become almost obsessed with the desire to find something animal and alive in the valley. But nothing stirred there and the sun had moved several long notches toward the horizon.

Perhaps another vantage point...

The longer he stayed on the hill above the farm, the less he liked his cover story. Birdwatcher, indeed! Why hadn't Porter mentioned the absence of animal life? Insects, of course: the grass was alive with them, crawling, buzzing, flitting.

Depeaux slid and crawled away from the crest, rose to his knees. His back ached from all of the unnatural movement. Grass burrs had invaded his collar, were under his belt, under his stockings, up his sleeves. He managed a smile, half grimace, at his own discomfort, could almost hear Merrivale commenting: "*Part of the price you pay for engaging in this line of work, old bean.*"

Son of a bitch!

Porter's careful reports had indicated no guards posted outside the farm's perimeter, but that was just one man's account. Depeaux asked himself how he felt about his position in the open under the oak. You stayed alive in this business by ultimately trusting only

your own senses—and Porter was missing. The fact represented an important piece of information. It could be innocent or ominous, but it was safer to believe the worst. At the worst, Porter was dead and the people of Hellstrom's farm were responsible. Merrivale believed this. He had made that clear and the secretive bastard could have information to confirm it without any of his agents being the wiser.

You will proceed with the utmost caution, keeping in mind at every juncture our need to determine precisely what has happened to Porter.

The son of a bitch probably already knows what has happened, Depeaux thought.

Something about the one-pointed emptiness of the region spoke of hidden dangers. Depeaux reminded himself that agents who leaned too heavily on the reports of others often ended up dead, sometimes in painful and ugly fashion. What was it about this place?

He swept his gaze around his backtrail, saw no sign of movement or watching eyes. A glance at his watch told him he had slightly more than two hours before sunset. Time to get to the head of the valley then and scan the length of it.

Bending low at the waist, Depeaux got to his feet and, in a crouching trot, moved swiftly toward the south below the concealing ridge. His breathing deepened easily with the effort and he thought for a moment that he wasn't in such bad condition for a man of fifty-one. Swimming and long walks weren't the worst recipe

in the world—and he wished he were swimming that instant. It was dry and hot under the ridge. The grass was full of nose-tickling dust. Desire for a swim did not bother him greatly. Such wishes had come often in the sixteen years since he had moved up from an office clerk in the Agency. The fleeting desire to be elsewhere he usually passed off as an unconscious recognition of danger, but sometimes it could be attributed to no more than bodily discomfort.

When he had been a mere clerk in the Baltimore office Depeaux had enjoyed his daydreams about working as an agent. He had filed "final reports" on agents "wasted in action" and had told himself: If ever I get to be an agent I shall be extremely cautious. The promise had not been hard to keep. He was by nature careful and painstaking—"the perfect clerk," some of his fellows carped. But it was painstaking care that had led him to commit the farm and its surroundings to memory, to note possible cover (little enough of that!) and the game trails through the tall grass indicated on aerial photos.

Game trails but no visible game sign, he reminded himself. What kind of game ran these paths? It was another note on his increasing sense of caution.

Depeaux had once overheard Merrivale commenting to another agent: *The trouble with Carlos is he plays for survival.*

As though old Jollyvale didn't do the same, Depeaux told himself. The man hadn't reached his present eminence as operations

director without an eye for the mainline.

DEPEAUX could hear the faint trickling of the waterfall at the valley's upper end. A clump of madronas stood at the invisible line on Depeaux's mental map, marking the northernmost reach of Hellstrom's valley. Depeaux paused in their shade and made another survey of his surroundings, paying special attention to his own backtrail. Something about that open area—nothing moved in it, but Depeaux made a decision then and there to wait for darkness to cover his return across that space.

Thus far it had not been too bad a go, he told himself. Just that faintly disquieting sense of an unknown danger. The second examination of the valley from this upper vantage point should not take too long. Perhaps he might reconsider and go back by daylight to the bicycle and an early check-in with Tymiena at the van. Perhaps. That first decision to wait for darkness had gone deeply into him, though.

Play it safe, he reminded himself. Play for survival.

He turned left briskly, unslung his binoculars and slipped up through a stand of oak and madrona to a clump of oily green bushes behind the rock face of the valley's upper limit. The tinkling waterfall was quite noisy through the undergrowth. At the bushes Depeaux dropped to all fours, tucking the binoculars under his shirt and cinching the pack tightly against his right side. He went through the now familiar stalking

crawl then, turning partly onto his left side to protect the binoculars and keep the pack off the ground. The bushes ended presently in a short rock lip that exposed a lengthwise view of Guarded Valley.

As he brought out the binoculars Depeaux wondered idly where the Indians had been slaughtered. The noise of the waterfall was quite loud about fifty feet to his right. He rested on his elbows, brought up the binoculars.

The farm buildings were farther away from him this time and the large barn-studio concealed all but the western wing of the house. A crooked stretch of stream was clearly visible from this new vantage. Its surface remained mirror calm, as though stagnant, reflecting the trees and brush at its verge. The view opened up at the valley's far end, revealing the rolling grasslands and clumps of trees, the patches of distant cattle.

Why wouldn't the cattle venture into the rich grass closer to the end of the valley? Nothing visible was keeping them away: no fence, no ditch—nothing.

DEPEAUX became aware of a vehicle moving in a dust cloud far off beyond the cattle. That was the narrow track he and Tymiena had taken. Who was coming down there? Would they see the camper? Tym would be out there with her paints, drawing pictures of the stupid landscape, of course, but still . . . Depeaux focused his binoculars on the dust, presently made out a large covered truck. It was following the crazy

meander track toward the valley and moving fast. He tried to locate Tymiena, but the hill to his left blocked off that vista and the camper sat in tree shade along a side road. The oncoming truck might not pass close enough to see her. It made no difference anyway, he told himself. A strange excitement gripped him.

He brought his attention back to the farm buildings. Surely someone would come out to greet the truck. He would get his first look at the occupants of this odd place. He studied the scene intently.

Nothing moved within the valley.

They must hear the truck. He could hear it himself even from this greater distance and above the waterfall's intrusion.

Where were the farm's occupants?

The binoculars had collected dust again. Depeaux paused to reflect on the situation while he applied the linen cloth once more to the lenses. He knew it might appear ridiculous, but the absence of surface activity in the presence of so much evidence that people carried on an active life here filled him with disquiet. It wasn't natural! Everything was so damned motionless in the valley. He experienced the skin-creeping sensation of being watched by countless eyes. When he rolled over and peered back through the brush he could see not one moving thing. Why did he expect trouble from these conditions? He did, though, and his inability to explain the expectation filled him with irritation. What were they hiding here?

Despite Merrivale's attempts

to present this case as a plum for the chosen agent, Depeaux had tasted the oddness of it from the beginning. Shorty Janvert obviously had shared that sense of something profoundly wrong. This thing was sour! And it was not the sourness of green fruit and easy pickings. It was a prickling of the senses that came from knowledge of something overripe and rotten, of something that had stewed too long in its own juices.

The truck was just beyond the valley now, making its final climb up the easy slope to the north fence. Depeaux brought his binoculars to bear on it once more, saw two white-clad figures in the cab. They were visible only dimly through sun reflections on the windshield. And still no one came from the farm buildings.

The truck turned close to the north fence, revealing large words on its flat white side: N. HELLSTROM, INC. The machine made a wide turn until it was heading away from the farm, stopped and backed up to the gate. Two blond young men emerged from the cab. They trotted briskly to the rear, dropped a gate that extended to a ramp with rollers. They clambered into the open cave of the bed, slid a tall yellow and gray box from the shadows there. The box appeared heavy from the way they strained at it. They tipped it onto the gate's rollers, let it slide swiftly to a jolting, dusty stop on the ground.

Depeaux watched the whole operation intently. What the hell was in that box? It was big enough for a coffin.

The men hopped down, strained

against the box until they brought it teetering upright. They walked it to a position clear of the tailgate, closed the truck, got back into the cab and drove away.

The box remained about ten feet outside the north gate.

Depeaux examined the surface of the box through his binoculars. It was taller than the men from the truck and it was heavy. It appeared to be made of wood and was bound by what seemed to be flat metal straps that ran around it from top to bottom.

A delivery, Depeaux mused. What in hell could be delivered to this farm in a box that shape?

Hellstrom had his own truck to bring things to the farm, but he didn't worry about his deliveries waiting in the sun outside his gate. There might be nothing unusual about that, on the surface of it. The Agency's dossier carried considerable information about Hellstrom's film company. That was the N. Hellstrom, Inc. Hellstrom was both owner and manager. He made documentary films about insects. Sometimes Hellstrom's film efforts were incorporated into quite substantial productions that were distributed through other companies in Hollywood and New York. It was all easily explained until you sat on this hillside and watched the operation, as Depeaux was doing now and as Porter had done before him. What had become of Porter? And why wouldn't Merrivale permit a straightforward missing-person investigation?

There was something else about Hellstrom's operation.

His un-operation.

III

From the Hive Manual: The relationship between ecology and evolution is an extremely close one, deeply implicated in organic changes among a given animal population and profoundly sensitive to the density of numbers within a given habitat. Our adaptations aim to increase the population tolerance, to permit a human density ten to twelve times greater than is currently considered possible. Out of this we will get our survival variations.

THE conference room held an air of detached waiting as Dzule Peruge strode into it and took the Chief's chair at the head of the long table. He glanced at his wristwatch as he put his briefcase on the table. Fourteen after five P.M. In spite of the day's being Sunday they were all present—all the important men and the one woman who shared responsibility for the Agency.

Without any of the usual preparations Peruge sat down, said, "I've had an extremely trying day. To cap it, the Chief called me just two hours ago and told me I would have to deliver his report to you. He had to take care of some questions from Upstairs. That, of course, took priority."

He swept his gaze around the room. It was a quiet and cushioned place, this penthouse boardroom. Gray curtains covered the double windows on the north side, giving the sun's afternoon rays a feeling

of cool, underwater light as they filtered through to the dark, polished wood of the tabletop.

There were some impatient coughs around the table, but Peruge's listeners took the replacement without objection.

He squared the briefcase in front of him, extracted its contents—three thin folders. He said, "You've all seen the Hellstrom file. The Chief tells me he circulated it three weeks ago. You will be glad to know that we have now cracked the code on page eleven of the original sheaf. It was a rather interesting one, based on a four-unit configuration our people tell me was derived from the DNA code. Very ingenious."

He cleared his throat, pulled one thin sheet from the top folder, scanned it. "Again, this refers to Project Forty, but this time distinctly in terms of a weapon. The exact words are: '. . . a sting that will make our workers supreme over the entire world.' Very suggestive."

A man down the table on Peruge's left said, "Poppycock! This Hellstrom produces movies. That could be a dramatic piece of business for a film."

"There is more," Peruge said. "It includes partial instructions for an exchange circuit which our man at Westinghouse assures us is real. He was quite excited by the implications. He called it 'another key to the puzzle.' He concedes that it is an incomplete key—where the circuit would fit in the larger scheme is not indicated. However, there was one more item in the coded section."

Peruge paused for effect, glanced once around the table. Then "The message is quite direct. It instructs the bearer of the subject papers to transmit his future reports through a man in Washington, D.C. The man is named. He is the Senator whose activities we have come to question."

Peruge wanted to laugh. Their reaction was precisely what the Chief had said it would be. He had their undivided attention, a thing seldom granted in this room of giants.

The man directly at his left asked, "No doubt of that?"

"None whatsoever."

From Dzule Peruge's original report on Joseph Merrivale:

Subject has no detectable inhibiting emotions of warmth toward his fellows, but counterfeits these reactions well. His administrative abilities are adequate for the tasks we have in mind, but he lacks qualities of initiative and daring. He is exactly what we had in mind, a man who can keep his division running smoothly and can, if directed, send his people to their deaths without a qualm. Promotion recommended.

AS HE left the conference Peruge allowed himself a small sense of triumph. There had been a few touchy moments with that bitch, but he had managed them well, all things considered. He still could not understand why they had ever allowed a woman onto that board.

Rain, when he reached the

street, was freshening the evening air, but also imparting a smell of wet dust which Peruge particularly disliked. He hailed a cab.

The driver, as luck would have it, was a woman. Peruge settled back into the seat with a sigh of resignation, said, "Take me to the Statler."

There was no telling where women would intrude next, he thought. They were essentially frail things and should not be allowed into these occupations. His judgment was based on observations of his mother, who had gone through life torn by conflicting attitudes toward her ancestry and toward the demands of her sex. She had Black, Cherokee, Portuguese and Cajun ancestors that she knew about. Sometimes she had been proud of her outgait progenitors. *Never forget, boy, that your ancestors were here before the first white thief set foot on these shores.* At other times she would remind him: *We were sailors under Henry the Navigator when most sailors never came back from a long voyage.* But she could temper these outbursts of bitter pride with cautious warnings: *Dzule, you look white enough for nobody ever to know about the niggers in our blood. Play the white game, boy—that's the only way to win in this world.*

He had won the field this day, no doubt about that. The bitch of the board room had cross-examined him about Hellstrom's corporate activities, trying to catch him in a contradiction. The Chief had warned him about that. *They'll want to take advantage of*

you and check up on the Agency. I'm trusting you to give them blow for blow. That was the Chief for you—like a father to those he trusted.

Peruge had never known his own father, who had been only the first in a long line of men who partook of Juanita Peruge's favors. Her family name had been Brown, a commonplace easily discarded for the more mysterious Peruge. The father had stayed with Juanita long enough to name the infant Dzule for a half-remembered uncle. Then he had gone on a commercial fishing voyage that would have satisfied the Navigator's worst fears. His boat had been lost in a storm off Campiche.

Tragedy had been the firming cement of Juanita's character. It offered her the splendor of a lifelong search to replace a love which time made ever more romantic and unattainable. And for Dzule she created a myth of the mighty John (originally Juan) Peruge—tall, bronzed, capable of any great deed he might envision. A jealous god had taken him, which said something pertinent about gods.

This tragedy, seen through his mother's fantasies, had made Dzule forgive any of her offenses against morality. His earliest and strongest image of *woman* said she could not withstand life's crueler torments except by seeking the pleasures of the bed. That was just the way she was and one had to accept it.

The Agency had been a natural place for Dzule Peruge to find himself. Here the strong sought

their place in life. Those who took the blinders from their eyes naturally gravitated here. The Agency was a last outpost of swashbuckling. In the Agency no dream was too remote, provided one recognized most humans as essentially frail—especially women.

The bitch of the board was no exception. There was a weakness in her—had to be. She was clever, though, and with her own brand of driving ruthlessness.

PERGUE stared out through the taxi's window at the rain-washed streets, reviewing the encounter in the board room. She had opened the attack by bringing out her own copy of the Hellstrom file. She had found the entries she wanted, referred to them and said, "You tell us Hellstrom's company is private, incorporated in nineteen-fifty-eight. One chief stockholder, himself, and three officers—Hellstrom, a Miss Fancy Kalotermi and a Miss Mimeca Tichenum." She had put down the file and stared down the long table at Peruge. "The disturbing thing to many of us is that, although two women signed their names to these incorporation documents in front of witnesses, duly notarized, you show no other record of them."

Peruge's response, he thought, had suited the attack. "That's correct. We don't know where they came from, where educated, nothing. They both sound foreign, but the notary in Fosterville was satisfied with their identities and the attorney saw no objection to their being officers in a corporation doing business in this country.

Mimeca could be an oriental name, as some of you have indicated, and the other one does sound Greek—we just do not know. This is not a page we intend to keep in its present blank state. We are exploring this avenue."

"Do they live at Hellstrom's farm?"

"Apparently."

"Any description of them?"

"Vague—dark hair, possessed of general female characteristics."

"General female characteristics? I wonder how you'd describe me. Well, no matter. What is their relationship to Hellstrom?"

Peruge had taken his time with the response. He knew how he appeared to women. He was tall: six feet, four inches, and imposing, 221 pounds. His sandy hair held a distinct touch of red which his eyebrows carried to a darker tone. The eyes were that dark brown often mistaken for black and deeply socketed above a rather abbreviated nose, wide mouth and square chin. The whole effect was dominantly masculine. He had sent this machismo message down the table with a sudden grin.

"Madam, I would not describe you to anyone, not even to myself. Such is my responsibility to the Agency that you remain nameless and faceless. As to these other women—Hellstrom trusted them sufficiently to want them as officers of his corporation, which makes us extremely curious about them. We intend to satisfy that curiosity. You'll note the documents list the Kalotermi woman as vice president and the other one as secretary-treasurer, yet each

has but one per cent interest in the corporation."

"How old are they?" she had asked, glowering at him.

"Adult."

"Do they travel with Hellstrom?"

"We have no record of that."

"And you don't even know whether these women have husbands or male attachments of any other nature?"

Peruge's heavy brows tended to draw down in thought or anger.

"We don't know this—no."

"And Hellstrom, is he married or otherwise entangled?"

"Not that we know. The reports tell you all we have at this time."

"All? How old is Hellstrom?"

"We're guessing at thirty-four. That's farm and ranching country and he was educated at home for the first seven years. His grandmother, Trova Hellstrom, was an accredited teacher."

"I've done my homework," she had said, tapping the file. "I raised the question to suggest that he's fairly young to have caused so many waves."

"Old enough."

"You say he lectures and does an occasional seminar or colloquium and has been on the faculties of several universities. How does he get these assignments?"

"On his reputation."

"Hmmmph! What do we know of his other associates?"

"His technical people, business connections—you've seen the file."

"And he banks in Switzerland. Interesting. Any indication of his worth?"

"Only what's in the file."

"Have you considered making

discreet inquiries of his lawyers?"

"Do you take us for cretins?" Peruge had asked.

She had stared at him silently for a moment. Then: "I said discreet."

"His legal counsel, as you've seen there, is a native of Foster-ville, which is a small town," Peruge had explained carefully. "A liaison between two dogs cannot be undertaken discreetly in such a setting."

"Hmmmph."

PERUGE had looked down at the folders in front of him. She had known, of course, as had the rest of them, that he had not been telling the full story.

"Have any of our people ever met this Hellstrom?" She had asked.

Peruge had looked up, wondering: *Why are they letting her be their spokesman? Most unusual.* He had said, "As you perhaps know, the Chief has connections to a vice president of the bank that handles financial matters for the film company that usually markets Hellstrom's productions. This vice president has met Hellstrom socially and we have his report. It will be in your hands shortly."

"This bank does not work for Hellstrom's own company?"

"No."

"Have we made overtures through our Swiss connections?"

"There's no provable fraud involved and we cannot, therefore, gain open access to the Swiss records. We are still pursuing this, however."

"What is the vice president's

total impression of Hellstrom?"

"An able man in his own field, rather quiet, but capable of occasional bursts of concentrated energy where his own interests are concerned. Specifically—when the subject of ecology arises."

"What salaries does Hellstrom pay his employees?"

"Union scale where that's indicated—guild scale—but we have no tax returns for some of them."

"The two women on his corporation records?"

"Apparently they serve him for something other than money. We believe they live on the farm, but they have declared no income. It has been suggested that Hellstrom is less than generous or that fraud is involved. We cannot say as yet. Such records as we've seen indicate that his film company makes no profit. All the income appears to be taken by ongoing activities of an apparently legal, that is to say, educational, nature."

"Could that farm be some sort of subversive school?"

"Some of the younger people allegedly stay there for an education in film-making and in ecology. That's detailed in the file."

"Detailed," she said, her voice flat. "Can we presume his installations have been examined by building inspectors and that sort? Oregon must have laws about such things."

"He was inspected by local people and the accuracy of information based on those inspections remains in question. We will update your files as we are able."

"Hellstrom's technical people, cameramen and such—are they

all recognized in the industry?"

"Their work has attracted praise."

"But the people themselves—are they admired?"

"One could say so."

"What would you say?"

"The question has little meaning except as an indicator for further investigations. It is our opinion that successful people in that industry tend to achieve a surface admiration from their fellows, but that this surface attitude conceals an often quite profound hostility. Admiration in the usual sense has little to do with the situation except as it may indicate competence or income."

"How much traveling has Hellstrom done since the report in our hands?"

"One trip to Kenya and two days at Stanford."

"Is he away at this moment?"

"Possibly. I would have to consult our most recent reports to be sure. We have just fielded a new team, as you know. You will be informed, of course."

"Your previous reports show him staying away from his farm for two weeks to a month at a time. Who minds the store while he's away?"

"We do not as yet know."

"How thorough have our investigations of him been during his more vulnerable travel periods?"

"We've had his luggage searched and found only cameras, film, technical works, papers, that sort of thing. The most common subject matter for any written material in his possession has been insects. He appears most thorough where

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his specialty is concerned. We have found nothing incriminating."

"What about planting something on him?"

"It is contra-indicated because of his stature in education. Too many would believe his protestations."

She had sat back then, quiet for a moment. Presently she had said, "You will inform the Chief that there must be a profit in this somewhere. We are not satisfied."

Not satisfied, Peruge thought, tapping his finger impatiently on the taxi's black plastic seat. But they were afraid and that was enough for the time being. If the actual material of the Project 40 file panned out, if it developed along the lines he and the Chief had purposely not reported, then there would be profits enough for all, including Dzule Peruge. It would never be a weapon, of course. The thing created too much heat in its own circuits. But at low temperatures that heat might be translated into an induced heat for metal and plastic products. At the very least it would transform metallurgy, reducing present costs by a breathtaking factor. There would be profit in that!

IV

Brood instructions for selected workers: We use the language of the Outside, but with our own meanings. It is important that the key distinctions not be confused. The practices of concealment demand this. Because we are virtually defenseless against the best

forces of the Outside, our major defense remains in their never learning that we live among them, but pattern ourselves after hive creatures.

AS THE afternoon above Hellstrom's valley wore on Depeaux began reflecting on the briefing sessions with Merrivale. It was a matter of emphasis, but he began to wonder just how many agents had been "wasted" on this project. Merrivale was a queer duck—that damned affected British accent and all. But there had been times when he gave off the distinct impression that he admired Hellstrom. It was Merrivale's pattern to admire only success, but his was an admiration always tinged with fear. The closer to Merrivale the success occurred, the greater his fear.

The personless valley continued to bake in the hot autumn sun. Depeaux grew almost somnolent and there were moments when his eyelids dropped.

He forced himself to concentrate on the farm buildings. If the last reports were to be believed Hellstrom himself was down there in one of those buildings. Nothing visible confirmed this assumption, however.

Why would Merrivale admire Hellstrom?

An abrupt slamming sound shocked Depeaux into full awareness. He saw movement at the far left corner of the barn-studio. A wheeled cart came into view. It was an odd vehicle, reminiscent of an old-fashioned railway baggage cart, the hand-pulled kind used in

stations. It had high slat sides and big spoked wheels. A high-pitched voice called out a command from somewhere behind the building, but Depeaux could not make out the words. It had sounded like: "Work a load." That made no sense, though.

A young woman strode from behind the barn to the front of the cart and at first Depeaux thought she was nude. The binoculars revealed skin-colored briefs, but she wore no bra, no blouse. Her feet were tucked into sandals.

The powerful glasses put Depeaux right up next to the young woman as she lowered a steering bar that had been caught upright at the front of the cart. She had firm breasts with dark nipples. He was so intent on watching her that he almost missed the approach of another young woman clad the same way, noticing her only when a strange third hand entered his field of vision. The young women were enough alike to be sisters, but didn't fit the descriptions he had of the women who served as officers of Hellstrom's corporation. Their hair was a light gold.

The young women took the steering bar and, pulling on it, trundled the cart toward the north gate. They moved with a bouncing urgency Depeaux found inconsistent with the long wait the box had had outside the gate. He saw no other reason for the cart. They were going to get the box. What was in that damned thing? And why were they almost nude? He recalled how the two deliverymen had strained in moving the box, wondered if the two women were expected to

get that heavy object onto their cart. Surely others would come out and help.

With increasing amazement he watched the women open the gate, wheel the cart into position, drop its end and tip the box into the cart's bed. They lifted the heavy box with a muscular ease that astonished him, displaying a far easier time with it than had the men who delivered it. Briskly they closed the end of the cart and trotted back toward the barn with the same sense of urgency they had shown on the outward trip. In far less time than he had expected they were at the barn and out of his sight behind it. Again came that abrupt slamming sound. A door?

Depeaux estimated the whole incident had taken no more than five minutes. Astonishing. They were Amazons. Yet they had appeared at first to be no more than well-developed young females. Was Hellstrom's farm a hideout for health nuts, a kind of inland muscle beach? The nudity argued for some such answer as that. Depeaux didn't like that answer, though—everything about the two women had been too casually businesslike. They weren't muscle fanatics. They had simply been two workers going about a job and it had been a job they knew well enough not to need excess words or motions in executing it. Why women for that kind of work?

It was another damn default message!

DEPEAUX glanced at his watch—less than an hour

to sunset. The valley and its farm has settled back into that disturbing surface tranquillity. The place had been rendered even more empty by the brief spurt of human energy from the young women.

What the hell was in that box?

The low sun washed across the ridgetop to his left, shadowing the valley's depths, but light reflected from golden grass and leaves on the opposite hillside kept the shadows lucent. Depeaux knew he was in good cover under the dark bushes, but valley and countryside once more had taken on that sense of ominous quiet. He took a deep breath and reaffirmed his decision to wait for night before leaving. This place had all the atmosphere of a trap. He squirmed backward, deeper into shadows, peered left at the open countryside he would have to cross. The long, low light bathed the field in a golden glow touched with orange. The light cast a definite shadow along the path of crushed grass that marked his trail.

I was fool to come up that way, he thought.

And perversely: *What was Porter's mistake?*

A sense of desperate immobility overcame him. The unexpected muscularity of those semi-nude young women, the persistent, irritating hum from the barn-studio, the unspoken warnings in Merri-vale's briefings and the reports, that internalized vacuum of a valley set against the distant movement of cattle far outside it (why so far?)—everything told him to wait for darkness. He lay for almost an hour, watching, stewing in his

own premonitions. And still he had to wait. . .

The light dimmed. The sky took on a purple streaming against incandescent orange glow in the west. The slopes of the valley drifted into a dusky almost-blackness where it was difficult to determine if he actually saw details or was remembering them. No lights showed from the farmhouse or the barn. Visibility dropped to only a few feet, but when he crept out from under the bushes there were stars and a far sense of light on the northern horizon. That would be Fosterville, he knew. Still no lights from the farm.

Another default message.

Depeaux felt around him to make sure he was free of the bushes, rose to his feet. There was a tension ache in his back. He groped in his knapsack, took out a sandwich in a rattling of paper, unwrapped it and ate while he regained his sense of direction. Fosterville's glowing was a good landmark. The sandwich restored him and he took a long swallow of water, secured his pack.

The sense of danger remained.

The illogic of it dominated his consciousness, but he had learned to trust that sense. It was a message contained in everything he had studied about this place—all he had heard and all he had seen. It was a message as well of things not seen and not heard. The combination said: *Danger.*

Get the hell out of here, he told himself.

He twisted his watchband to bring the luminous dial of its

companion compass into view, sighted along it and set off across the field. As he moved out of the trees, his vision improved and he gained a sense of the long, sloping expanse of dried grass through which he had crept earlier.

The ground was uneven under the grass and he stumbled often. His passage kicked up dust and several times he stopped to repress a sneeze. His own passage through the grass seemed to him abnormally loud in the night silence, but there was a faint breeze and when he stopped he could hear it sighing in the trees ahead of him. There was a similarity between the two sounds, which he tried to improve upon by slowing his pace. He had accumulated more grass burrs and they rasped his skin. Slow movement irritated him, too. He found himself unconsciously picking up speed. Something inside him said: *Hurry*.

The luminous dial of his compass and the glowing sky oriented him well, though. He found he could see the occasional trees in the field and avoided them easily. The dark line of thicker trees through which he had come stood out plainly. There would be the game trail to follow through there. He expected to encounter the trail long before his feet actually felt the hard, grassless surface. He crouched to feel the surface with his hands, tracing the almost worn-down hoofmarks in the dirt. No deer had passed this way in a long while. Those were very old marks—he had noted this earlier, but now it compounded the total message of this place.

DEPEAUX started to straighten and strike out along the trail when he became aware of a distant swishing in the field behind him. He tipped his head to listen. The swishing didn't sound like someone walking through the grass or like the wind. It had no definite position—just somewhere back there. Starlight showed him nothing but distant shadows that could be trees, the configuration of the land. The sound was growing louder and he felt menace in it. There was something akin to a susurrant humming in it now. He straightened, turned away from the sound and began trotting along the trail. He found he could make out the track if he peered down at a sharp angle.

Soon he was at the line of thicker trees, the witchspread of madronas and the heavier spacing of pines. The trees reduced the faint assistance starlight had given him and he was forced to slow his pace to a walk. Several times he lost the trail and had to grope for it with his feet. He longed to take out the small flashlight in his pack, but that odd sound had grown even louder behind him. It was a definite hissing-humming now. What made that sound? The noise of countless hoopskirts dragging through the grass would not be as mechanical. The image of hoopskirts amused him for a moment, though, until he thought of the seminude young Amazons at the farm. Somehow they were not amusing even when clad in his imaginary hoopskirts.

He had hidden the bicycle in bushes where the game trail crossed

a narrow dirt road. That road led around a low hill and down a long slope to the county road where he had parked the van. The bicycle had a handlebar light and he promised himself he would use that light and ride like hell.

Was that sound behind him louder? What the hell could make it? Was it something natural? Birds, perhaps? The susurrant intrusion reached now out into the grass on both sides of him, as though he were being drawn into the wings of an advancing army. Depeaux had the auditory impression of many creatures moving in a wide fan to enclose him. He tried to increase his speed, but the night was too dark—he kept running into trees.

What was that sound?

His body was wet with perspiration—fear was tight in his chest.

Again he tried to quicken his pace, tripped and fell full length. The susurrant pursuit stopped. Depeaux lay quietly, waiting, probing with his ears. Nothing. What the hell? The absence of sound was as frightening as its presence had been. He rose slowly to his feet and immediately the noise started again. It was on both sides and behind him. Terrified now, Depeaux stumbled forward, tripping, lurching, crashing through trees, sometimes on the trail and sometimes off it.

Where was that damned road where he had hidden the bike?

The horns of enclosing noise were ahead of him now, on both sides and ahead. Depeaux, panting, stumbling, groped for the flashlight in his pack, found it. Why hadn't he brought a gun? An auto-

matic even? A little one like the one Tymiena carried? Damn! What was that noise? He wondered if he dared turn on the flashlight and sweep its beam around him. He hadn't been able to make himself bring even a little gun! No! His birdwatcher cover had ruled against it! He was panting and gasping now. His legs ached.

The road was under his feet before he realized it. He stumbled to a halt, tried to get his bearings in the dark. Had he left the trail just back there? He didn't believe he could be far from the bushes where he'd hidden the damned bike. It had to be right nearby. Did he dare use the flashlight? The hissing hum enclosed him now. The bike had to be just to his right. It had to be. He groped toward blacker shadows among shadows, stumbled over a bush and landed in the frame of the bicycle.

Cursing under his breath, Depeaux rose to his feet, pulled the bicycle upright and leaned against it. He could see the road better now—a separation of lightness in the dark—and he thought suddenly how good it would be just to get on the bicycle and coast back to the van and Tymiena. But the hissing hum had grown louder, closing in on him. The hell with them. He yanked the flashlight from the pack, depressed the switch. The beam stabbed out into the trees. It revealed three young women clad as the Amazons at the farm had been—tight briefs and sandals—but their eyes and noses were hidden behind glossy dark shields the shape of diving masks. Each carried a long wand with a twined, whip-

like end. The wands made him think of some odd antenna system, but their doubled ends were pointed directly at him and there was no mistaking the menace.

From Nils Hellstrom's diary: Sometimes I realize my name isn't important. It could be any other grouping of sounds and I'd still be me. Names are not important. This is a good thought. It is precisely as my brood mother and my first teachers said. The name I used represents an accident. It is not the name that might have been given to me had I been born into an Outsider family with all their usual self-centered individualism. Their consciousness is not my consciousness—their timeline is not my timeline. We of the Hive will do away with names some day. My brood mother's words convey a deep sense of reassurance in this. Our perfect society cannot allow permanent individual names. They are labels at best, are names. They are useful only in a transient way. Perhaps we will carry different labels at different stages in our lives. Or numbers. Somehow numbers feel more in keeping with the intent my brood mother expressed so well.

IT WAS twenty minutes to three A.M. and for almost ten minutes now Clovis had been watching Eddie pace back and forth in the tiny living room of her apartment. The telephone had awakened them from deep sleep and Eddie had answered

it. He had come openly to her apartment. The Agency didn't mind that. It expected certain sexual antics from its people and appreciated it when such activity was kept intramural. Nothing deep and demanding in this sex—just good, energetic bodily enjoyment.

All Eddie had said after hanging up was: "That was DT! Merrivale told him to call. They've lost contact with Carlos and Tymiena."

"Oh, my God!"

She had gotten out of bed, draped a robe about her. Eddie had gone directly into the living room.

"I should have answered the phone," she said now, hoping this would break him out of his deep reverie.

"Why? DT was looking for me."

"Here?"

"Yes."

"How did he know you were here?"

"He tried my place and nobody answered."

"Eddie, I don't like that."

"Shit!"

"Eddie, what's the rest of it? What did DT say?"

He stopped in front of her and stared down at her feet, which she had pulled partly under her body when flopping into a chair. "He says we've gotta play brother and sister again. Nick Myerlie is going to be our daddy and we're going on a nice vacation way out in Oregon."

V

From Nils Hellstrom's diary: Fancy is showing sure signs of unhappiness about her life in the Hive. I wonder if she has

somehow become conditioned to prefer life Outside. We've always worried about that and it does appear to happen sometimes. I'm afraid she'll try to run away. If she does I think I will opt for stumping her, rather than putting her in the vats. Her firstborn, Saldo, is everything we had hoped. I do not want the Hive to lose that breeding potential. It's too bad she's so good with the insects. We will have to keep close watch on her until the present film is finished. Whatever happens, we cannot send her on any more Outside assignments until we're sure of her. Perhaps we should give her more internal responsibility for the film. She might grow to share my vision then and be cured of this instability. This film is so very necessary to us. It is a new beginning. With it and the ones to come we will prepare the world for our answer to human survival. I know that Fancy shares the schismatic belief. She believes the insects will outlast us. Even my brood mother feared this danger, but her answer and my refinement of that answer must be developed. We must become more intensely like those upon whom we pattern our lives

"DOES this shock you?" Hellstrom asked.

He was a blond man of medium build, whose appearance suggested no more than the thirty-four years Depeaux knew the Agency's records credited to him. There was

a great sense of internal dignity about Hellstrom, a sense of purpose that revealed itself in the way his blue eyes held a direct stare on anything or anyone of interest to him. He gave the impression that he contained more energy than he released.

Hellstrom stood in a laboratory, confronting his captive, who had been tied to a plastic chair. The laboratory was a place of polished metal and gleaming white surfaces, of glass and instrument dials illuminated by a flat milky light from a coving completely around the ceiling's edge.

Depeaux had awakened here after being unconscious. He did not know how long he had been in a coma, but his mind was still fogged. He had awakened to find Hellstrom standing in front of him and two completely naked women guarding him. He knew he was paying too much attention to the women, another pair of Amazons, but he couldn't help it.

"I see they shock you," Hellstrom said.

"Guess they do at that," Depeaux admitted. "I'm not used to seeing so much naked female flesh around me."

"Female flesh," Hellstrom said and clucked his tongue.

"Don't they mind our talking about them this way?" Depeaux asked.

"They do not understand us," Hellstrom said. "Even if they did they would not understand your attitude. It is a typical Outsider attitude, but I never fail to find it strange."

Depeaux tried a cautious testing

pull at the bindings that held him to the chair. He had come to with his head throbbing and it still ached. There was a pain right behind his eyes and he had no idea of how much time had passed. He recalled starting to speak to the three young women his flashlight had revealed—then he had been startled into silence by the sudden awareness that many more similar figures filled the darkness all around him. A confused welter of memories clouded that recollection. God, his mind still felt thick. He remembered speaking, an innocuous and stupid response brought about by fear and shock: "This is where I left my bicycle."

Christ! He had been standing there, holding the damned bicycle, but those opaque diving masks had daunted him. They had given no clue to the eyes behind them or to intentions. The wavering double wands aimed at him could only have meant threat, though. He had had no idea what those wands were, but a weapon was a weapon was a weapon. The double wands had branched from short handles, which the young women had gripped with firm competence. The tips of the instruments had emitted a low hum. While he had been wondering if he dared to try breaking through the circle, a nightbird had swooped toward the fluttering insects attracted by his light. A figure in the dim area beyond the light had raised her double wand. A sudden dry hissing, the same sound he had heard all around him crossing the fields, and the bird had collapsed in the air and plummeted to the ground. A woman had scrambled

forward and stuffed the bird into a sack at her shoulder. He had noticed then that many of the women carried such sacks and that the sacks bulged.

"I—I hope I'm not trespassing," Depeaux had ventured. "I was told this was a good area for my hobby. I like—to watch birds."

How stupid he had sounded.

What in hell were those wands? That bird hadn't even flopped once. *Hiss-bang!* Merrivale hadn't said anything about this. Could this be Project 40, for God's sake? Why hadn't the crazy broads around him said something? It was as though they hadn't heard him—or didn't understand him. Did they speak another language?

"Look," he had said, "my name is—"

And that was all he could remember, except for another brief burst of that odd hissing hum from his left and, yes, the painful sensation that his head had exploded. He remembered that now—explosive pain within his skull. His head still ached as he stared up at Hellstrom. Those wands had done it—no doubt of that in his mind. The two women standing guard behind him carried the same weapons, although they weren't wearing the masks of the group that had encircled him.

I'm in the soup, he thought. *Nothing to do but brazen it out.*

"Why do you have me tied up?" he asked.

"Don't waste our time with the ingenuous approach," Hellstrom said. "We must keep you secured until we decide how to dispose of you."

Depeaux, his throat painfully dry, his heart suddenly pounding, said, "That's a nasty word, that *dispose*. I don't like that word."

HELLSTROM sighed. Yes, the word had been a poor choice. He was tired and it had been a long night and it wasn't over yet. Damn these Outside intruders. What did they really want? He said, "My apologies. I don't mean to cause you needless worry or discomfort. But you are not the first person we have caught here in similar circumstances."

Depeaux experienced an abrupt sensation of *deja vu*. He felt that he was reliving something half-remembered because it had not been his own experience, but something that had happened to someone close to him. Porter? He hadn't been all that close to Porter, but . . .

"And you disposed of these others, too?" Depeaux asked.

Hellstrom ignored the question. This was all so distasteful. He said: "Your credentials identify you as a salesman for a firewords company. One of the others who intruded here worked for this identical company. Isn't that strange?"

Depeaux forced his words through a dry mouth. "If his name was Porter there's nothing strange about it at all. He told me about this place."

"No doubt a fellow bird watcher,"

Hellstrom said. He turned his back on Depeaux. Was there no other way to meet this threat?

Again Depeaux recalled the bird the woman had knocked from the night sky. What was that weapon? Was it the answer to the mystery of

Project 40? He decided to try another tack. "I saw some of your woman friends kill a bird last night. They shouldn't do that. Birds are an important part of—"

"Oh, be still!" Hellstrom spoke without turning. "Of course they killed a bird—and insects, rabbits, mice and quite a few other creatures as well. We couldn't waste the night sweep just picking you up."

Depeaux shook his head. *Night sweep?* "Why do they do that?" he asked.

"For food, naturally."

Hellstrom glanced back at his captive. "I must have time to consider the problem raised by your presence. I don't suppose you'll drop your subterfuges and tell me the whole story."

"I don't even know what you're talking about," Depeaux protested, but he was sweating profusely and knew Hellstrom could read that sign.

"I see," Hellstrom said. He sounded sad. "Do not try to escape. The two workers there know they must kill you if you try to get away. There's no sense trying to talk to them. They don't speak. They're also quite jumpy—they can smell your difference. You are an Outsider in our midst and they've been trained to dispose of such intruders. Now, if you'll excuse me."

Turning on his heel, Hellstrom strode from the room, pushing a sliding door aside. Before it closed Depeaux glimpsed a wide corridor filled with milky light and thronging with humans—males and females, all completely nude. Two of them passed the door as Hellstrom left, causing him to hesitate. The

two, both women, carried what appeared to be a naked male body, the head and arms flopping, swaying.

From Nils Hellstrom's diary:

It is a conceit that makes me write these lines, trying to imagine the specialists who will read them. Are you really there in some future time—or are you merely creatures of my imagination? I know the Hive will need the abilities of readers for a long time. But forever is an even longer time and it dwarfs my small utterances. You who may be reading these words, then, if you share my questionings, must realize that your talents as readers may be abandoned eventually. Whether this specialty serves an infinite purpose is a real question. There may come a time when these words remain, but there will be no one to read them. In a practical sense the material on which my words are recorded would perhaps be recognized as useful stuff to be employed for other purposes. It must be a conceit, then, that I address myself to anyone. That I do so at all must be attributed to an instinct for short-term purpose. I support my brood mother's solution to the Outsider problem. We must never merely oppose the Outsiders, but should work with compromise and constant pressure to absorb them into our unity. This is what we do now at my direction and, if you have changed that goal, I tell myself that my helping you to under-

stand me may be useful in your planning for the future.

HELLSTROM had been awakened from his daysleep by a young female watchworker. Her observation screen had revealed the Outsider intruding on Hive territory. Hellstrom's cell had been closed off for the privacy a keyworker could enjoy, and the young watchworker had come personally to Hellstrom, shaking his shoulder gently to awaken him. She had given him the information in the swift and silent gesture language of the Hive.

The intruder could be observed on the hill above the Hive-head buildings. He was using binoculars to study the area. His approach had been noted far out by sensors in a perimeter tunnel. He had left a companion with a vehicle near the road to Fosterville.

The entire message took three seconds.

With a sigh Hellstrom slid from the foam and down warmth of his bed, flashed a hand signal to the watchworker that he understood. She left the cell. Hellstrom crossed the floor's smooth tiles, their coolness helping to awaken him. He activated the bank of repeaters that gave him contact with the Hive's security sensors. He focused on the section the watchworker had indicated.

At first Hellstrom had difficulty locating the Outside intruder in the tall grass. The light was always bad in that direction at this hour of the afternoon. He wondered if the watchworker could have been mistaken about the screen to watch.

The watchworkers became sensitive and twitchy at times, but he had yet to find one turning in a false alarm or making a major error.

Hellstrom studied the tall brown grass carefully. The panorama in the hot afternoon light appeared unbroken. Abruptly something moved in the grass at the ridgecrest. As though movement had created a new scene, he saw the intruder. The Outsider was a male clothed to match the grass with a closeness that surely could not be accidental. More than seventy years of living the Hive life had made the necessity for concealment a reflex with Hellstrom. He had possessed the sense of caution long before he had assumed a false age and moved out of the Hive to build an Outsider identity. Now, seeing the prying intruder, he moved briskly, slipped his feet into sandals, draped a white lab smock over his body. He glanced at the crystal-driven clock on his wall: 2:59 P.M. The clock, accurate to four seconds in a year, had been built by a brood-mate whose breeding and training had sent her into the laboratories for life.

Hellstrom thought about the intruder. If this one waited as the others had done he could be taken in the dark. Hellstrom made a mental note to get the night sweep started early and with special preparations for this possibility. The Hive had to learn why these Outsiders were prying.

Before leaving his cell, Hellstrom studied the Hive's outer perimeter on his repeaters and saw—far down in the western valley—a camper with a woman seated beside it,

sketching on a tablet held in her lap. He magnified the view, saw nervous tension in the woman's shoulder muscles, an involuntary movement of the head that drew her gaze up the slopes leading to the Hive. She would have to be picked up, too. Why were Outsiders suspicious of the farm? Who was behind this? There was something professional about this intrusion that made Hellstrom's heartbeat quicken.

He chewed thoughtfully on his lower lip while he searched inwardly for an instinct with which to meet this threat. The Hive was strong and hidden in a way that did not invite attention, but he knew how vulnerable it was, how little that strength would count against the shocked awareness of the Outsiders.

HIS gaze moved absently around his cell. It was one of the larger cubicles in the complex warren that underlay the farm and surrounding hills. It had been one of the first constructed by the original colonists who had brought their centuries-long migrations here under his brood mother's guidance.

It is time to stop running, my beloved workers. We who have lived furtive double lives among the Outsiders for more than 300 years—disassembling, always ready to move at the slightest suspicion—have come to the place that will shelter us and make up strong.

She had claimed a vision guided her, a visit in her dreams from the Blessed Mendel "... whose words told us that the way we had always known was the true way."

Hellstrom's earliest education,

the one he had received before going Outside as a counterfeit teenager sent at last to get his "book learning," had been filled with the thoughts of his brood mother.

The best must breed with the best. In that way we produce the disparate workers we need for every task our Hive can confront.

On that cold April day in 1876 when they had begun to dig outward from the natural caverns beneath the farm, building their first Hive, she had told them: *We will perfect our way and thus become the "meek" whose Earth will one day welcome them.*

The cell he occupied now dated from that first digging, although the diggers and his brood mother had long ago gone into the vats. The cell was sixteen feet wide and twenty-two feet long, eight feet from floor to ceiling. It was not quite square at the rear to accommodate an arm of the original natural cavern. The cell could have had a door in that arm, but the decision had been made to put service conduits, piping and other ducts there. From the original limestone labyrinth the Hive had been extended downward more than a mile, reaching outward in a circle almost two miles in diameter below the 3,000-foot level. It was a teeming warren of close to 50,000 workers (far beyond his brood mother's hopes), closely integrated with their own factories, hydroponics gardens, laboratories, breeding centers, even an underground river that helped produce the power they required. No wall of the original cavern could be seen now.

All walls were a uniform smooth gray and made of the hive's own mucilaginous pre-stressed concrete.

In Hellstrom's own cell the tough gray wallspace had been covered with various plans and sketches involved in the Hive's growth over the years. He had never taken them down, a wasteful idiosyncrasy the Hive tolerated in very few workers. His walls were now thick with pasted-over records of the Hive's vitality.

Although he had more cell space than others, his furnishings were otherwise Hive-standard: a bed formed of the mucilage slabs with rawhide lacing under a foam pad, chairs of similar construction, desk of mucilage supports for a ceramic top in rich glassgreen, twelve metal filing cabinets of Outsider manufacture (Hive cabinets were sturdier, but he fancied these for their reminder value), the repeater console with its screens and direct line into the central computer. A wardrobe with Outsider clothing in one corner marked him as one of the key workers who fronted for the Hive in that threatening world beyond their perimeters. Except for two adjustable lamps, one over the desk and the other over the repeater console, the room was illuminated by coved radiating tubes along the intersection of ceiling and walls, a standard practice in all the galleries, tunnels and cells of the Hive.

He could have had one of the newer modern and more sophisticated cells in the lower levels, but Hellstrom preferred the place he had occupied since the day his brood mother had gone to the

vats "*becoming one with us all.*"

Hellstrom strode back and forth on the tiles of his floor now, worrying about the intruder. Whom did that man represent? Certainly he was not there out of casual curiosity. Hellstrom sensed a powerful force outside slowly turning its deadly attention toward the Hive.

He knew he could not delay his response any longer. The watchworkers would be irritably restless. They needed commands and a feeling that proper action was being taken. Hellstrom bent to his console, coded his instructions and sent them into the relay system. Those instructions would be transmitted throughout the warren. Key workers would take pre-assigned actions. Every worker selected by the relay system through the Hive's central computer would see gesture signals on a screen. The silent language of the Hive would bind them into a common defense.

In common with many of the key workers who would unite thus, Hellstrom knew how thing the Hive's defenses really were. The knowledge sent fear through him now and he longed for the mental oblivion of the commonworker who had few concerns beyond immediate tasks.

DRIVEN by his fear, Hellstrom opened a filing drawer, extracted a folder tagged JULIUS PORTER. The ordinary vat mark had been stamped on the outside of the folder to tell what had happened to Porter's flesh, as though he had been discarded breeding stock whose records were kept as com-

mentary on offspring, but Porter had no offspring in the Hive. He had merely brought a sense of mysterious threat, which he had left largely unanswered. Something about the new intruder outside right now made Hellstrom think of Porter. Hellstrom trusted such instincts. He glanced through the closely spaced lines of information inscribed in Hive code. Porter had carried credentials identifying him as an employee of the Blue Devil Firewords Company of Baltimore. He had babbled something finally about "The Agency." This Agency has represented in his terrified mind something that would avenge him.

Agency.

Hellstrom regretted now that they had sent Porter so soon into the vats. The act had been callous and careless.

The idea of using the pain of a fellow creature, however, went against Hive sensitivities. Pain was a recognizable phenomenon. When it occurred in a worker and could not be eased that worker might go to the vats. Outsiders did not behave this way, though. This was a Hive peculiarity. One killed to eat, to survive. The killing might cause pain, but that was quickly ended. One did not prolong it. Survival might dictate other courses, but the Hive avoided those.

Presently Hellstrom put the folder aside, depressed a key at his repeater station. He asked for one of the security overseers in the aerie watchroom of the barn-studio. The instrument that carried his voice was of Hive construction and he admired its flat functionalism as he

waited for a response. Old Harvey came on the screen above the instrument. His voice quavered slightly. Old Harvey would have to go into the vats before long, Hellstrom reflected, but that could be delayed because this man had talents the Hive required—and never more desperately than right now. Old Harvey had been one of the First Breeders. His seed was all through the Hive. But he was also knowledgeable in the ways of the Outside and an imaginative guardian of Hive security.

They spoke openly on the internal circuit. There wasn't even the remotest chance that the Outsiders possessed instruments that could penetrate the Hive's electronic barriers. In this field Hive specialists already had moved far ahead of Outsiders.

"You know about the intruder, of course." Hellstrom said.

"Yes."

"You've been watching him personally?"

"Yes. I sent the watchworker to call you."

"What's he been doing?"

"Just watching. With binoculars mostly."

"Do we have anyone out?"

"No."

"Is any exterior activity scheduled?"

"Only a delivery—diamond bits for our Level Fifty-one drills."

"Don't pick it up until you clear with me."

"Right."

"Is there any chance he's carrying relay instruments that could monitor his activities from a distance?"

"Porter carried no such instruments."

HELLSTROM suppressed a feeling of irritation, but noted that Old Harvey had also made that same unconscious connection with Porter.

"I mean, have we checked?" Hellstrom asked.

"Not completely. We're still in process of checking."

"Ah, we're being thorough," Hellstrom said.

"Of course."

"Tell me as soon as you're sure."

"Yes."

"What about aircraft?" Hellstrom asked. "Anything?"

"Two jets, very, high—more than an hour ago."

"Any indication of probes from the jets?"

"Nothing. They were commercial transports. Clean."

"Does the intruder look as though he's settled in for a long stay?"

"He has a knapsack and lunch. We think he'll wait for nightfall before leaving. We've been hitting him with an occasional low-frequency burst to keep him jumpy."

"Excellent." Hellstrom nodded to himself. "Keep up the subsonics. If he's nervous he'll make mistakes. But don't use too much—you could drive him off before dark."

"I understand," Old Harvey said.

"Now, as to that woman waiting by the vehicle out near our perimeter—what do you make of her?"

"We're keeping her under close surveillance. The intruder came

from her direction. We think they're associated." He cleared his throat—the loud and rasping sound said something distinct about his age. Hellstrom was made acutely aware that Old Harvey must be more than two hundred years old and that was very old for a First Colonist who had not had the benefit of an entire lifetime under Hive regimen.

"Undoubtedly they're associated," Hellstrom said.

"Could they be innocent intruders?" Old Harvey asked.

"Do you really entertain that idea?" Hellstrom asked.

There was a long pause, then: "Not likely, but possible."

"I think they came from the same source as Porter," Hellstrom said.

"Should we have our people in the east look into the Blue Devil Fireworks Company?" Old Harvey asked.

"No. That might betray the extent of our influence. I think extreme caution is indicated—especially if this pair has come to find out what happened to Porter."

"Perhaps we acted too hastily with that one."

"I've had my own misgivings on that score," Hellstrom admitted.

"What is this Agency that Porter represented?"

HELLSTROM reflected on this. The question contained his own unease. Porter had talked profusely at the end. The scene had been disgusting and had hastened his transit into the choppers and the vats. Yet the necessities of that episode could have clouded its content. No member of the Hive would ever

have behaved that way. Not even an ordinary worker, although they could speak no language intelligible Outside. Porter had said the Agency would get them. The Agency was all-powerful. *We know about you now! We'll get you!* Porter had been the first adult Outsider ever to see the inner workers of the Hive and his hysterical revulsion at the ordinary things necessary for Hive life had shaken Hellstrom.

I responded to hysteria with a hysteria of my own, Hellstrom thought. *I must never do so again.*

"We will question this pair more carefully," Hellstrom said. "Perhaps they can tell us about this Agency."

"You think it wise to capture them?"

"I think it necessary."

"Perhaps other responses should be considered first."

"What are you suggesting?"

"Discreet inquiry by our people in the east while we dissemble for these new intruders. Why should we not invite them in and let them watch our surface activities. They surely cannot prove we are responsible for the disappearance of their fellow."

"We don't know that for certain."

"Surely their reaction would have been different if they knew we were responsible."

"They know," Hellstrom said. "They just don't know how or why. No amount of dissembling now will put them off. They'll keep worrying at us like ants at a carcass. We must dissemble, yes, but we must keep them off balance at the same

time. I am keeping our people Outside informed, but my instructions remain that we exercise the utmost restraint and caution there. Better to sacrifice the Hive than to lose all."

"In your considerations, please note that I disagree," Old Harvey said.

"Your exception is noted and will not be ignored."

"They are sure to send others," Old Harvey said

"I agree."

"Each new team is likely to be more skilled, Nils."

"No doubt of that. But great skill, as we've learned from our own specialists, tends to narrow the vision. I doubt very much that these first probes involve the central element of this Agency. Soon, however, they will send someone who knows all the things we wish to know about those who come prying into our affairs."

Old Harvey's hesitation betrayed that he had not considered this possibility. Presently he said, "You will try to capture and control such a one?"

"We must."

"That's a dangerous gambit, Nils."

"Circumstances dictate the risk."

"I disagree even more," Old Harvey said. "I have lived Outside, Nils, I know them. Yours is an extremely perilous course."

"Do you have an alternative with a lower potential risk?" Hellstrom asked. "Extend your plot-line before answering. You must think of the ultimate consequences along the sequence of events dictated by our present response. We made a mis-

take with Porter. We thought him the kind of Outsider we have taken and consigned to the vats previously. The wisdom of the sweep-leader brought him to my close attention after his capture. The mistake at that point was mine, but the consequences involve us all. My own regrets do not change the situation one whit. Our problem is complicated by the fact that we cannot erase all the backtracks that led Porter to us. We have been able to make such erasures before without exception. Our previous successes lulled me into a false complacency. A long history of success does not ensure correct decisions. I knew this and yet failed. I will entertain an action to depose me, but I will not change my present decision on a course of action—which includes an awareness of my past mistake."

"Nils, I'm not suggesting that we depose—"

"Then obey my instructions," Hellstrom said. "Although I am a male, I am chief in the Hive at my brood mother's command. She reckoned the importance of that choice and, thus far, her vision has remained close to actual events. And while you're putting the sonic probes on that woman and her vehicle, check it for the possibility that she may have a child inside."

Old Harvey sounded hurt. "I'm aware of our constant need for new blood, Nils. Your orders will be obeyed at once."

HELLSTROM released the communications key, and Old Harvey's face disappeared from the screen. Old Harvey's Hive

awareness might be dulled by that early history of Outside life, but he knew how to obey against the dictates of his most basic fears. In this respect he was completely trustworthy—which was more than could be said for most of the humans who had evolved Outside, conditioned as they were there by the sharp limitations that prevailed in what the Hive thought of as “wild societies.” Old Harvey was a good worker.

Hellstrom sighed at the knowledge of the burden he carried—almost 50,000 dependent workers were going about their activities in the Hive warren. He listened with his whole being for a moment, probing for the sense that told him all remained normal in the Hive. Normalcy felt like the low humming of harvesting bees on a hot afternoon—there was a restful sense to it that he needed at times to restore him. But the Hive gave him back no such reassurance now. He could actually sense the disquiet of his own commands spreading throughout the Hive and reflecting back onto himself.

All was not well here.

The need for caution had always been a constant pressure on the Hive and every one of its inhabitants. He had his own fair share of this inbred caution which had been finely tuned by his brood mother and the ones she had chosen to educate him. He had been against making the documentary movies at first. But the Hive aphorism—*Who could know more about insects than the Hive-born?*—had overcome his objections and finally even he had entered the spirit of the film

enterprise without reservations. The Hive always needed that ubiquitous energy symbol, money. The films brought a great deal of money to their Swiss accounts. That money focused concern on the Hive's remaining needs for Outside resources—the diamond bits for their drills, for instance. Unlike the “wild societies,” however, the Hive sought a harmony with its environment, cooperating to serve that environment, thus purchasing the environment's service to the Hive. Surely that profound internal relationship, which had always supported the Hive in the past, would support it now. *The films are not a mistake*, he told himself. There was even something poetically amusing about their purpose: to frighten Outsiders by showing them reality in the form of films about the world's insect populations—while a much deeper reality growing out of that insect mold fed on the fears it had helped augment.

He reminded himself of the lines he had insisted be written into the script of their most recent film effort. *In the perfect society there is neither emotion nor mercy—precious space cannot be wasted on those who have outlived their usefulness.*

THIS new Outsider intrusion made Hellstrom think now, however, of the Bee Wolf, whose predatory raids must be met with every resource a Hive could muster. In the cooperative society the fate of each could be the destiny of all.

I must go topside immediately, he told himself. I must take per-

sonal command at the center of our protective efforts.

Moving briskly, he went out to a nearby communal washroom, showered with several chemically neutered female workers, used a hive-made depilatory on his face and returned to his personal cell. There he dressed in heavier Outside garments—tan trousers, a white cotton shirt and dark gray sweater, a light-brown jacket over that. He put on socks and a pair of Hive-made leather shoes. As an afterthought he took a small foreign pistol from a desk drawer and slipped it into his pocket. The Outsider weapon had a greater range than a stunwand and would be familiar to the intruders, recognizable by them if a threat were needed.

He went out then down the familiar galleries and corridors with their hum of Hive activities. The level's hydroponics rooms were on his way, their doors open to permit easy access for harvesters. He glanced in as he passed, noted how swiftly the routine was progressing. Hide baskets were being filled with soybeans, two workers to a basket. An Outsider might have interpreted the scene as one of confusion, but there was no squabbling, no conversation. No workers collided with each other; no baskets were spilled. Filled baskets were being slid smoothly into the dumbwaiter slots in the far wall, there to go up to processing. Any necessary signals were conveyed by silent hand motions. When examined in the light of Hive awareness, the giant rooms were a collection of evidence—all of which pointed to supremely effective organization. These were

chemically conditioned workers, effectively neutered, none of them hungry (feeding conveyors were only a few steps away down the main gallery) and they worked in the certain awareness that what they did was vital for the entire Hive.

Hellstrom's own progress past the harvesting became a kind of elegant dance through entering and emerging workers. No precise scheduling of crews was required here. Workers left when hungry or overcame by fatigue. Others entered to fill the gaps. All knew what was required of them.

At the elevator, which was one of the older, upper-level models with a visibly jerking motion at the open doorways, he was delayed for a moment while a planting crew filed past him, headed for the hydroponics rooms with selected seedstock for replanting. There must be no delay in maintenance of the food cycle that lay at the very base of their survival.

Hellstrom stepped into the open gap of the elevator doorway when space appeared on an upbound car. The heavy animal odor of the Hive, which the scrubbing systems erased from vented air exchanged Outside, was strong in the elevator, a sign that leaks were developing far down in the shaft and would have to be repaired. Maintenance was a constant drain, but could not be ignored even now. He made a mental note to inquire about shaft maintenance. Within two minutes he was in the sub-basement of the barn-studio, his attention concentrated once more on the immediate emergency.

We must not consign these new intruders to the vats too soon, he told himself.

VI

From Nils Hellstrom's diary: In the oral tradition, which spanned more than 100 years before our progenitors began their first written records, it was said that the refusal to waste any colony protein dated from our earliest beginnings. I have come to doubt this. Outsider reactions indicate it is no more than a pleasant myth. My brood-mother likened the later practice of wasting nothing to the openness we of the Hive have with each other. The vats were for her a beautiful metaphor of uninhibited internal communication and, as she often said: *In this way, when one dies, no secret dies with her—whatever each has learned will be contributed to the success of the whole.* Nothing in the more than 200 years of our written records calls the original myth into question and I will not do so now in our open councils. Thus, I conceal something in the name of a myth that strengthens us. Perhaps, this is how religions begin.

IN THE Hive-head sub-basement caution became visible. A ladder of Hive-steel was anchored in one corner of the open area beneath the baffles and sound-dampers of the floor supports. The

ladder led upward through the baffles to a concealed trapdoor that opened into a cubicle of a communal toilet in the barn's basement. A concealed screen at the top of the ladder slid into position when a worker climbed to that point. The screen revealed whether the cubicle was occupied. A remote locking system secured the cubicle's door when a worker was emerging.

There were secondary monitoring screens at the base of the ladder and a watchworker was on duty there. The worker waved Hellstrom ahead, signaling that no Outsiders were in the studio area. The ladder was attached to a wall of one of the giant ventilation ducts that ended in the barn roof. He felt subtle vibrations as he climbed. He emerged from the cubicle presently and into an empty wash-room, which gave him passage into the studio's actual basement, a space of wardrobe stores, film stores, editing, processing facilities for film, dressing rooms and make-up areas, props . . . By Outsider standards, all would have seemed normal. Workers were going about their activities in the area, but they ignored him. Ordinary stairs at the end of a long hallway gave entrance through a sound-baffle system into a double-doored lock passage and thence to the main studio, which took up most of the barn's cavernous interior.

From the permanent minutes of the Hive Council: Present computations indicate that the Hive will begin to feel swarming pressures when it

passes a population of 60,000. Without some such protection as Project 40 would offer, we cannot permit such a swarming to occur. For all the ingenuity of our specialists, we are helpless before the combined might of the Outside. Its killing machines would crush us. The total dedication of our workers would send them to fall by the thousands in a suicidal attempt to insure the future of our kind. But we are few and they are many. The unreasoning brutality of nature's underlying plan must be stayed for this time of preparation. Some day, given the potency of some such weapon as represented by Project 40, we will be able to emerge, and if our workers die on that day they will die with reason—through selflessness, not through greed.

“THEY are, as usual, firm and polite—but evasive,” Janvert said, turning from the telephone.

It was daylight outside Clovis's apartment now and she had dressed in preparation for the specific summons they both knew would come soon.

“They told you to be patient,” Clovis said. She had returned to her favorite position on the long couch and sat with her feet tucked under her.

“One thing more,” Janvert said. “Peruge himself is going to head this team. Old Jollyvale doesn't like that one bit.”

“You think he wanted this one himself?”

“God, no! But he's Operations Director. With Peruge in the field Jollyvale can't give orders. He's effectively no longer Operations Director. That he doesn't like.”

“It's definite about Peruge?”

“No doubt.”

“That explains why they're not being very informative.”

“I suppose so.” Janvert crossed to the couch and sat beside her, taking her hand in his and rubbing the warm skin absently. “I'm scared,” he said. “I'm really scared for the first time in this business. I've always known they didn't give one particle of a damn about us, but Peruge—” Janvert swallowed convulsively. “I think he takes a positive pride in how many people he can waste and he doesn't care whose people they are—ours or theirs.”

“Don't let him know how you feel, for God's sake,” Clovis said.

“Oh, I won't. I'll be the usual happy-go-lucky Shorty, always ready with a quip and a smile.”

“Do you think we'll be going out today?”

“Tonight at the latest.”

“I've often wondered about Peruge,” she said. “I've wondered who he actually is. That funny damned name and everything.”

“At least he has a name,” Janvert said. “The Chief, now—”

“Don't even think it,” she warned.

“Haven't you ever wondered if we really work for the government?” he asked. “Or whether our bosses represent an over-government behind the visible one.”

"If you're talking about what I think you're talking about I don't want to know anything about it," she said.

"That's a good, safe attitude," he said. He dropped her hand, stood up and returned to his restless pacing.

Clovis was right, of course. This place was bugged. They'd know precisely where to call for him. No helping that. When you worked to make the world a fishbowl you lived in a fishbowl. The trick was to become one of the fish watchers.

From the Hive Manual: In the selection of workers, breeders and the various kinds of specialists, in the development of a Hive consciousness through all of the chemical and manipulative devices at our disposal, the blueprint of our cooperative society is etched with a potential for permanence that must be monitored with the greatest caution. Here each generation comes into the world as a continuation of the previous one, each individual a mere extension of the rest. It is in the consequences of that extension that we must build our eventual place in the universe.

AS HELLSTROM emerged into the open cavern of the studio a young woman production assistant, who had been working with a glass-enclosed beehive nearby, saw him and waved to attract his attention. Hellstrom hesitated, torn between the desire to go immediately up to the com-

mand post aerie and recognition of a need to maintain an air of unbroken continuity in Hive-supportive work. He recognized the young woman, of course—one of the lesser-crew who could front on occasion for limited contact with the Outsiders who came to look into the film work for legitimate reasons. She was one of the Niles-8 genetic line—the poor eyesight in that line would have to be corrected in the breeding processes. The strain was also susceptible to Outsider tastes, as was the Fancy line.

He noted members of the second film crew standing around the glassed beehive, their arms folded. Everything about the scene spelled a delay. That could be costly. Hellstrom weighed his various problems. Old Harvey could be trusted to obey his orders. The money represented by this film equaled a vital resource. Hellstrom shifted direction in mid-stride, headed toward the production assistant and her idle crew. She had a plain face not helped by large granny glasses and blond hair pulled back in a severe chignon. But she had a full figure and was obviously fertile. Hellstrom wondered idly if she had been examined yet for her personal breeding potential.

Using her Outside name, he spoke as he came up to her: "What is it, Stella?"

"We're having some unexpected trouble with this beehive and I wanted to call Fancy in for assistance. But I was told you have her on another assignment from which she cannot be released."

"That's true," Hellstrom said, realizing that someone had taken him literally in his private instructions to keep Fancy under close surveillance. "What's happening with your bees?"

"They're balling on the queen every time we try to get her exposed for photographing. The last time that happened Fancy told us to call her—said she might be able to help."

"Did she give you an alternative to calling her?"

"She said to try a tranquilizer in their feeder and in their air."

"Have you done this?"

"We'd like to have them more active."

"I see. Did Fancy tell you what might be causing the trouble?"

"She thinks it's something in the air—maybe atmospheric electricity or a chemical emitted by our bodies."

"Can we shoot around these bees for now?"

"Ed thinks we can. He wanted to call you earlier and see if you'd be available for one of the lab sequences in which you appear."

"When would he want to shoot it?"

"Tonight, probably by around eight o'clock."

Hellstrom fell silent, considering all his manifest problems. Then: "I think I can be ready for that shooting by eight. Tell Ed to set up for it. I've had my daysleep and can work all night if need be." He turned away. That should keep things here on an even keel, but he saw the bees at once as a metaphor of his own Hive. If the Hive became too upset things could get out of

hand. Workers might take action on their own. He signaled to a boom operator in the center of the studio, pointed to himself and to the loft that gave entrance to the command aerie.

The boom cage on its long arm swung down to the studio floor with all the silent grace of a mantis reaching for its prey. Hellstrom stepped into the cage and it wafted him upward, swung in a wide arc and deposited him at the edge of the loft floor. As he stepped out, Hellstrom reflected on how admirably this device served the needs of both security and of cover. No one could get up to the loft without the help of a trusted boom operator, yet it was the most natural thing to think of a boom as an elevator and to use that as excuse for leaving no other access into the security section.

THE loft had been set up with a central well running for half the length of the barn along its longest dimension. The other half concealed the outlets for ventilators, with a bypass for visual examination of the valley's upper reaches. Slide ropes had been coiled neatly at even spacings along the edge of the loft floor, each rope secured to one of the stanchions of the guard rail. The ropes offered an emergency access to the studio floor. Neither the ropes nor the inner wall behind the walkway—nor the doors into the various security stations were visible from the studio floor.

Hellstrom walked along the open area, noting a slight smell of dust, which alerted him to remind

the cleaning crews that the studio must be kept free of dust. The catwalk with its view down into the multiple activities in the studio, led him along the soundproofed wall to an end door with both sound and light baffles.

He let himself into Old Harvey's station through the dark passage of the baffle. It was gloomy inside and filled with the smells of outside, which came in through open louvers at the end. An arc of green-glowing repeater screens had been installed along the inner wall against a termite-bomb destruction system that could burn out the entire barn right down to the non-inflammable mucilaginous quick-plugs that could be triggered to seal off the Hive-head. The present emergency made Hellstrom acutely aware of all these preparations—they had been a part of Hive awareness for many years.

Old Harvey looked up from the console as Hellstrom entered. The old man was gray-haired and had a big, forward-thrust face like a Saint Bernard's. He even had dewlaps at the edges of his jawline to accent the likeness. His eyes were widely spaced, brown and deceptively mild. Hellstrom had once seen Old Harvey behead a hysterical worker with one sweep of a meat cleaver—but the memory dated back to his childhood and that hysterical line had been weeded out of the Hive's breeding stock.

"Where's our Outsider?" Hellstrom asked.

"He had something to eat a while back, then crawled off the hilltop," Old Harvey said. "He's

working his way toward the upper end of the valley now. If he stations himself where I think he will we'll be able to watch him directly with binoculars. We're keeping all the lights out inside, of course, to reduce the chance that he'll notice activity up here."

Good, cautious thinking, Hellstrom agreed. He asked, "Have you reviewed the Porter material? I noticed earlier that you—"

"I've reviewed it."

"What's your opinion?"

"Same sort of approach, clothing designed to give him concealment in the grass. Want to bet his cover is that he's a birdwatcher?"

"I think I'd win."

"Too much professionalism about him," Old Harvey said. He studied one of the console screens, pointed and said, "There he is, just like I expected."

The screen showed the intruder crawling under a stand of bushes for a view down the length of the valley.

"Is he carrying a weapon?" Hellstrom asked.

"Our sensors indicate not. I think he has a flashlight and a pocketknife in addition to those binoculars. Look at that. There are ants up there on the ledge and he doesn't like them. See how he's brushing them off his arm."

"Ants? How long since we've swept that area?"

"A month or so. Do you want it checked?"

"No. Just have it noted that it may be time for another sweep there by a small crew. We need several nests in the newer hydroponics sections."

"Right." Old Harvey nodded and turned to relay instructions by hand signal to one of his assistants. "That Porter was a strange one. I've been reviewing what he said. He told us quite a bit, really."

"He was in the wrong business," Hellstrom agreed dryly.

"What do you think they're after?" Old Harvey asked.

"We've somehow attracted the attention of an official agency," Hellstrom said. "They don't have to be after anything except satisfaction for their own brand of paranoia."

Old Harvey grimaced, shuddered. "I don't like the feeling of this, Nils."

"Nor I."

"Are you sure you've made the right decision?"

"To the best of my ability. Our first step must be to pick up this pair. One of them must know more than the late Mr. Porter."

"I sure hope you're right, Nils."

VII

From Nils Hellstrom's diary: Three of our younger geneticists were in among the fertile females again today and some of the older colonists in genetics complained. I had to explain to them once more that it was unimportant. The breeding impulse cannot be suppressed in active key workers who require the full functioning of their mental abilities. I have been known to indulge myself thus from time to time and the older genetics specialists know this very well. They

were really complaining about me, of course. When will they ever understand that genetic manipulation has very severe limits, given our present stage of development? Luckily the older ones are dying out. Our own truism applies here: *Into the vats old, out of the vats new.* Any offspring from this latest foray will be watched closely, of course. Talent is where you find it. We all know how desperately the Hive needs new talent.

MERRIVALE did not like the tone of voice Peruge was using over the telephone, but managed to conceal this fact under an even flow of reasonable responses. Peruge was angry and was not attempting to hide the fact. To Merrivale, Peruge represented the one major obstacle between himself and another promotion. Merrivale thought he understood Peruge very well, but felt offended by the other man's superior position in the Agency.

Merrivale had been called away from the early afternoon briefing session that had been set up for the new teams being sent out to Oregon. He had left the meeting reluctantly, but without delay. One did not keep Peruge waiting. Peruge was one of the chosen few who had daily face-to-face contact with the Chief. He might even know the Chief's real identity.

A letterknife in the form of a cavalry saber lay on the smooth gray blotter of Merrivale's desk. He picked it up, pricked at the blotter with the sharp tip while he

listened, gouging deeply when the conversation took a painful turn.

"That was earlier in the month," Dzule," Merrivale said, knowing the explanation was insufficient, "and we did not know as much then as we know now."

"What do we know now?" The question was biting and accusatory.

"We know there's someone out there who does not hesitate to make our people simply—disappear."

"We already knew that."

"But we had not gauged the extent of our opposition's determination to defy us."

"Do we have so many people that we can just waste them finding out such important facts?" Peruge demanded.

The hypocrite. Merrivale thought. *Nobody has wasted more agents than Peruge. He gave me the explicit orders that cost us these teams.*

Merrivale dug a deep gouge in the blotter, frowned at the disfiguration of the surface. He reminded himself to have the blotter replaced as soon as this call was completed. "Dzule, none of our agents believes this business is a safe one. They know the chances they take."

"But do they know the chances you take with them?"

"That's unfair," Merrivale blurted and wondered what Peruge was doing. Why this abrupt attack? Was there trouble upstairs?"

"You're a fool, Merrivale," Peruge said. "You've lost us three good people."

"My orders were explicit and

you know it," Merrivale said.

"And given those orders—you did what you thought best."

"**N**ATURALLY." Merrivale could feel sweat collecting under his collar and rubbed his neck. "We had no way of knowing precisely what had happened to Porter. You told me to send him in alone. Those were your very words."

"And when Porter—just vanished?"

"You said yourself that he could have had personal reasons for disappearing."

"What personal reasons? Porter's record was one of the best."

"You said he'd quarreled with his—wife."

"Did I say that? I don't remember that at all."

So that's the way it is, Merrivale thought. His stomach felt painfully knotted. "You know you offered that as a possible reason for sending in a double team with identical orders to replace them."

"I don't know anything of the kind, Merrivale. You've sent Depeaux and Grenelli down that Oregon rathole and you sit there making excuses. When Porter was missed you should have originated an official inquiry for a vacationer believed to have been last seen in that region."

So that's going to be our new approach, Merrivale thought. *And if it succeeds Peruge gets the credit. If it fails I get the blame. Neat.*

Merrivale said, "I presume that's the line of attack you'll take when you get out to Oregon."

"You know damned well it is."

The Chief himself is probably listening to this, Merrivale thought. *Oh, God, why did I ever get into this business?*

"Have you told the new teams yet that I'll be leading them personally?" Peruge asked.

"I was briefing them when you called."

"Very well. I'll be leaving within the hour and I'll meet the new teams in Portland."

"I'll tell them." Merrivale spoke with weary resignation.

"And tell them—and I want it emphasized—that this new operation must be handled with the utmost discretion. There will be no grandstand plays, understood? Hellstrom has powerful friends and I don't mind telling you that this ecology issue is explosive. Hellstrom has said all of the right things to the right people and they think he's some kind of ecological messiah. Luckily there are others who realize he's a fanatical madman and I'm sure we'll prevail. Understand me?"

"Perfectly." Merrivale did not try to conceal his bitterness now. The Chief was listening to Peruge. No doubt of that. The whole thing was a staged performance—preparation of the sacrificial goat. The goat's name was, of course, Merrivale.

"I doubt very much that you understand me perfectly," Peruge said, "but it's likely that you understand me well enough to follow the orders I've just given you without any more disgusting errors. See to it at once."

A sharp click closed the line.

Merrivale sighed, replaced the receiver in its cradle on the elaborate scrambling phone. The signs were clear. He must juggle his own hot potato. If he dropped it—or if anyone else dropped it—fingers would point in only one direction. Well, he had been in this position before, just as he had placed others in the identical position. There was only one safe response. He must delegate authority, but do it so subtly that everything would still appear to be in his own hands. The logical candidate was Shorty Janvert. As a first step, Shorty would be named Number Two on this project, right under Dzule Peruge himself. Peruge had not specified whom he wanted as Number Two. That had been a mistake on his part. If Peruge changed the assignment, an action he might very well take, he would have to assume responsibility for everything his new *segundo* did. Shorty was a logical choice. Peruge had made it clear on several occasions that he did not fully trust Janvert. But the little man was imaginative and resourceful. The choice could be defended.

From the Hive Manual: The neutered worker is the true source of freedom in any society. Even the wild society has its neutered workers, the neutering being maintained behind a mask of actual fertility from which real offspring come. But such offspring have no share in the free creative life of the wild society and thus are effectively neutered. Such workers can always be

recognized. They are not burdened with intellect, with unrestricted emotion or individual identity. They are lost in a mass of creatures like themselves. In this neither our Hive nor the insects are giving the universe anything new. What the insects have and what we are copying is the society formed in such a way that its workers toil together to create the illusive Utopia—the perfect society.

IT TOOK Hellstrom's camera crew almost six hours to shoot the new lab sequence with mice and wasps. Even then Hellstrom was not satisfied that the crew had caught the effect he wanted on film. He had become very sensitive to the artistic merit of what the Hive created. The demands for excellence he was making now went far beyond the implicit knowledge that quality brought more income to the Hive. He wanted quality for its own sake for every aspect and expression of the Hive.

Quality of specialists, quality of life, quality of creations—all were interrelated.

Hellstrom had himself boomeranged to the aerie after the shooting was finished. He tried to conceal his worries over the latest report on the nightsweep. Because he had been in this sequence he had been tied to the set during the most important part of the sweep. It was still many hours to dawn and one problem had not been solved—the female who had accompanied their captive intruder remained at large.

One of the Hive's chief concerns

had always been to produce workers who could front for it with the Outside—incorruptible workers who would not betray even by chance what lay beneath Guarded Valley and its surrounding hills. Hellstrom wondered now if the present problem might not have uncovered a breeding defect somewhere in the personnel charged with the sweeps. The male intruder had been picked up easily beyond the bordering trees of the west meadow. A sweep detail had enveloped the camper almost immediately afterward, but it had somehow missed the female. That she could escape had not seemed possible, but none of the sweepworkers had even smelled her trail.

Many key security workers were in the aerie command post when Hellstrom entered. They noted his entrance, but stayed at their jobs. Hellstrom scanned the dimly lighted room with its arc of repeater screens, its little clutches of workers discussing the problem. Saldo was there, dark in the manner of his breeder mother, Fancy, but with the harsh hawk features of his Outsider father. (That was one thing Fancy did well, Hellstrom reminded himself. She bred Outside at every opportunity and the resultant new genes were prized by the Hive.) Old Harvey's post at the Security console had been taken over by a younger male of Fancy's line. He took the name of Timothy Hannsen in his Outside guise, which so far had seen limited use. Hannsen had been chosen for possible future training as a front because his penetrating

good looks tended to overpower the conscious balance of Outsider females. His sharply incisive mind also made him particularly valuable in a crisis. The trait was true of many in Fancy's line, particularly so in Saldo. Hellstrom had high hopes for Saldo, who had been taken on as a special educational charge by Old Harvey.

Hellstrom paused inside the door to gauge conditions in the aerie. Should he take over? The workers would defer to him at the slightest indication that he was assuming command. Brood mother Trova's decision had never been really questioned. They always sensed how much more potent was his commitment to the Hive, how much more effective his decisions. They might disagree at times and occasionally even prevail over him, but a subtle air of deference remained even when they voted him down in Council. And when, as often happened, his view proved later to have been the correct one, his hold upon them became even stronger. It was a situation toward which Hellstrom maintained a constant mistrust.

No worker is perfect, he told himself. The Hive itself must be supreme in all things.

OLD HARVEY stood against the wall at Hellstrom's left, arms folded, his face underlighted by glowing screens that produced the illusion that he had been cast from green stone. There was movement in his eyes, though. Old Harvey was watching the room critically. Hellstrom crossed to his side, glanced once at the dewlapped

old face and then at the consoles.

"Any sign of her yet?"

"No."

"Didn't we have her under constant infra-surveillance?"

"Radar and sonics, too," Old Harvey muttered.

"Did she have instruments to detect us?"

"She tried to use her radio, but we jammed it."

"That alerted her?"

"Probably." Old Harvey suddenly sounded tired and displeased.

"But she had no other instruments?"

"The vehicle had a small radar-type speed-trap warning device. I think she may have detected our surveillance that way, too."

"But how could she slip through our sweep?"

"Our people are reviewing the tapes again. They think she could have gone searching for her companion and been lost in the general confusion our sweep created on the instruments."

"The sweep should have picked her up despite any such confusion."

Old Harvey turned, looked directly at him. "So I told them."

"And they overruled you."

Old Harvey nodded.

"What do they believe happened?" Hellstrom asked.

"She took a calculated risk and went right into the midst of our searchers."

"Her smell would have given her away."

"So I said—and they agreed. They then suggested she slipped away from the truck to the north, using it as a shield. Their thought is that she walked softly to hide

her movements in the background static. There was a time gap between dark and the moment our sweep reached her vicinity. She could have done it. She had two choices—get away or slip up on us from another direction. They think she's out there stalking us."

"And you don't agree with that?" Hellstrom asked.

"Not that one," Old Harvey said.

"Why?"

"She wouldn't slip up on us."

"But why?"

"We hit her hard with the low-frequency. She was twitchy and nervous all afternoon, much too nervous to come for us."

"How do you know what her reserves of courage might be?"

"I watched her."

"She didn't look like your type, Harvey."

"Make your joke, Nils. I watched her most of the afternoon."

"So this is no more than your opinion from personal observation?"

"Yes."

"Why aren't you pressing that opinion?"

"I did."

"Given your choice, what action would you take?"

"You really want to know?"

"I do—or I wouldn't ask."

"First, I think she's slipped down to the northeast among those cattle in the pasture. I'm guessing that she knows cattle. There was something about her—" He wet his lips with his tongue. "If she knows cattle, she could have moved among them with no problems. They would have masked her smell

and provided all the cover she needed."

"No one here agrees with you?"

"They say those are range cattle and that they would have spooked at the first smell of her. We would have detected a stampede."

"And your response?"

"A lot of spooking goes to whether a cow can smell your fear. We know that. We use that factor ourselves. If she wasn't afraid of them and moved softly—well, we can't just close our eyes to the possibility that she may have done so."

"They don't want to search among the cattle, though?"

"They're bothered by the complications of a sweep down there. If we send workers they're sure to get out of hand and kill a few head of those cows. Then we have local problems."

"You still haven't told me what you'd do."

"I'd send some of us. We're trained to deal with the Outside. Some of us have lived out there. We have better control over the hunt response during a sweep."

Hellstrom nodded, spoke his thoughts aloud: "If she's up here close to us she hasn't a rabbit's chance of getting away. But if she's down there among those cows—"

"You see what I mean," Old Harvey said.

"I'm astonished that the others don't see it, too," Hellstrom said. "Will you lead the search party, Harvey?"

"Sure. I see you're not calling it a sweep."

"I'd just as soon you went out

and brought back only one thing."

"Alive?"

"If at all possible. We're not getting much from that other one."

"That's what I heard. I was down there when they first started questioning him, but—well, that sort of thing bothers me. I guess I lived too long Outside."

"I have the same reaction," Hellstrom said. "This is something better left to the younger workers who don't even know the concept of mercy. He told me almost nothing when I first questioned him."

"Sure wish there were some other way," Old Harvey said. He took a deep breath. "I'd best get about the—search."

"Choose your men and see to it."

Hellstrom watched the old man move out into the room, thought about the often sheer perversity of the young. The old possessed a special value for the Hive, a kind of balance that could not be denied. This incident was a sure demonstration of their value. Old Harvey had known what to do. The young workers had not wanted to venture out into that night themselves, though, and had decided the action was unnecessary.

Several of the younger male and female apprentices and the security workers of middle years had heard Hellstrom's conversation with Old Harvey. They made a shamefaced show now of volunteering for the search.

Old Harvey picked some of them, instructed them briefly. He made a special point of naming Saldo his second in command. That

was good. Saldo displayed a devoted respect for Old Harvey and it was surprising that the younger worker had not taken his teacher's side.

The answer came out in the briefing when Saldo said, "I knew he was right, but you wouldn't believe me, either." Apparently Saldo had sided with his teacher, but the others had lumped them both in one bag.

Ever conscious of his role as educator, Old Harvey chided Saldo for this remark. "If you thought as you say you should have given your own arguments—not mine."

The troops filed out of the room properly chastened.

Hellstrom smiled to himself. They were good stock and learned quickly. One had only to give them the correct example. *In age is balance*, his broodmother had been fond of saying. Youth, to her, had represented an extenuating circumstance which had always to be taken into account.

VIII

The words of Nils Hellstrom: Of the billions of living things on Earth only man ponders his existence. His questions lead to torment, for he is unable to accept, as the insects do, that life's only purpose is life itself.

TYMIENA GRINELLI had not liked this assignment from the beginning. She hadn't objected so much to working with Carlos (they had combined forces many times in the past) as she did to the

time she would have to spend with him when they were not working. Carlos had been flashingly handsome in his youth and had never accustomed himself to the gradual wearing away of his compelling attraction to women.

She had known that the off-duty association would be a constant bout of *sortie* and parry. Grinelli didn't fancy herself as a *femme fatale*, but she knew from experience her own magnetism. She had a long face that might have been taken as ugly except for the personality behind it. Her self shone through overlarge and startlingly green eyes. Her body was slender, the skin pale, and there was about her an air of profound sensitivity that fascinated many men, Carlos among them. Her hair was dark red-auburn and she tended to keep it confined in tight hats or berets.

Tymiena was a family name and its original slavic meaning had been: "a secret." The name described her manner. She held herself in constant reserve.

Merrivale had alerted her sense of danger originally by assigning only the two of them to the case. She had not liked what she had read in Porter's accounts and in the reports accumulated under the label: THE HELLSTROM FILE. Too many of these had been second- or third-hand. Too many of them were semi-official. They smacked of amateurism. Amateurs were a deadly indulgence in this business.

"Only two of us?" she had objected. "What about the local police? We could file a missing person report and—"

"The Chief does not want that,"

Merrivale had responded at once.

"Did he say so specifically?"

Merrivale's face had darkened slightly at any reference to his well-known propensity for personalized interpretation of orders. "He made himself abundantly clear. This matter is to be handled with the utmost discretion."

"A discreet local inquiry sounds to me well within that requirement. Porter was in that area. He's missing. These reports in the file indicate others may have disappeared in that vicinity. This family of picnickers with the twin babies, for instance, they—"

"A logical explanation has been accepted for every such occurrence, Tymiena," Merrivale had interrupted. "Unfortunately logic and actuality do not always coincide. Our concern is for the actuality and, in our pursuit of it, we shall utilize our own tested resources."

"I don't like their logical explanations. I don't give one particle of a damn what explanations local dumbheads may have accepted."

"Our own resources only."

"Which means we put our lives on the line again. What does Carlos say about this case?"

"Why don't you ask him? I've arranged a briefing for oh-eleven-hundred. Janvert and Carr will be here, as well."

"Are they in this?"

"They're in reserve."

"I don't like that, either. Where's Carlos?"

"I believe he's in Archives. You have almost an hour to explore this matter with him."

"*Merde!*"

She had swept from the room.

Carlos had been no more helpful than Merrivale. The assignment had struck him as routine. But then, assignments tended to strike Carlos as cast in some familiar mold. His habitual response was a universal, clerkish thoroughness of preparation—read all the material, study all the plans. To find that Carlos was in Archives had not surprised her. He had an Archives mind.

THE trip to Oregon and the cozy journey in the camper had been everything she had expected—crawling hands and a crawling mind. She had finally told Carlos that she had contracted a serious venereal disease on her previous assignment. He refused to believe this. She had told him quite calmly then that if he persisted she would put a bullet into him. She had displayed the small Belgian automatic in the wrist holster she always wore. Something about the clear calmness of her manner had told him to believe her. But he had taken the rebuff in muttering bad grace.

The job was another matter, though, and she had wished him luck when he took off in his ridiculous bird-watching clothes. All through the long day then, while she had been fulfilling her part of the "cover" by painting, she had grown increasingly nervous. There had been no particular thing upon which to focus her uneasiness, nothing concrete to explain it. The whole scene had bothered her, reeked of trouble. Carlos had been

predictably imprecise about his estimate of return time. It all depended on what he saw in his preliminary scan of the farm.

"Shortly after dark at the latest," he had said. "You be a good wife and paint your pretty pictures while I go look for birds. When I come back I'll teach you all about the birds and the bees.

"Carlos!"

"Ah, my love, some day I shall teach you to say that exquisite name with true passion." And the bastard had chucked her under the chin as he took his leave.

Tymiena had watched him zig-zag his way up the grass-brown slope into the trees. The day already was warm and filled with that special kind of insect-singing stillness that spoke of more heat to come. Sighing, she had taken out her water-color materials. She actually was quite a good water-colorist and occasionally during the long day she had experienced real involvement in putting down the essence of the autumn fields. The golden browns were particularly warm and inviting.

Shortly after midday, she put her painting aside temporarily and fixed herself a light lunch of sliced hardboiled eggs and yogurt, cold from the camper's icebox. During the break, although the camper's interior was oven hot, she stayed inside to check over the instruments. To her surprise, the speed-trap warning, which could be turned on its base and had a null indicator, showed radar activity in the direction of the farm. There was a clear signal aimed at the camper.

Radar surveillance of her from the farm?

She interpreted this as a danger sign and thought of going after Carlos to call him back. An alternative was to warm up the radio and report the development to headquarters. She knew with a sure instinct that headquarters would make light of it. And Carlos had ordered her to stay with the camper. In the end she opted for neither course. Her own indecision added a frustrating accent to the nervousness that continued to afflict her throughout the afternoon. The sense of danger accumulated. She felt that something was warning her to get away. Leave the camper at least. The camper was a big, fat target.

In the half-light of dusk, she folded up her painting tablet, dropped it and her paints on the cab seat and slipped into the seat at the radio. It took a moment to warm up and she checked the signal monitor, found a search-resonance fanning across her own frequency. When she keyed her transmitter, the search-resonance homed on her signal and jammed it. The monitor howled with the interference. She slapped the off-switch, stared toward the farm. The place was not visible from this parking spot, but she felt it out there as a malevolent presence.

There was still no sign of Carlos.

Darkness would be on her within minutes. She felt nervously for the little automatic in its wrist holster.

What the hell was delaying Carlos?

She turned out the camper's

lights, sat in the settling darkness. Radar from the farm's direction. They jammed her radio. This case had turned nasty. She stood up, moved softly to the rear door, slipped out on the side opposite the farm. The van itself would shield her from that searching beam. She dropped to all fours and worked her way swiftly into the tall grass. She had seen cows far down in the pasture below her and headed for them with a sure instinct. She had grown up on a Wyoming cattle ranch and, while she preferred approaching them on horseback, she felt no threat from them. The threat was behind her, somewhere up at Hellstrom's farm. The cows would offer her a masking confusion, concealment from that radar sweep. If Carlos returned, he would turn on the camper's lights. She would see them from a safe distance in the pasture land.

Somehow she did not expect Carlos to return. This whole situation did not make sense, had not made sense from the beginning, but she trusted her own instinct for self-preservation.

The words of Nils Hellstrom:

This primeval planet Earth is an arena of continual contest where only the most versatile and resourceful endure. On this testing ground where the mighty dinosaur staggered and fell, one silent witness hangs on. This witness remains our guide to human survival. This witness, the insect, has a three-hundred-million-year head start on mankind, but we will overtake him. He

dominates our Earth today and exploits his dominion well. With each new generation come new experiments in shape and function, transforming him into specters as limitless as the imagination of the insane. Yet, what this witness can do, we of the Hive can do because we are witness of him.

OLD HARVEY led his troop from a concealed perimeter exit at the northern edge of the Hive. Sod rolled back, a stump with a mucilage-sealed soil plug folded outward on a silent hinge and the troop emerged into the night. They were lightly clad in dark gray and the night was cold, but they ignored the chill. Each carried a stunwand and wore a night-vision mask with a powerful infrared emitter of Hive manufacture around its rim. They looked like a troop of skindivers and the wands were strange double-ended spears.

The stump-plug was seated securely before they left it, all sign of their passage removed.

They fanned out over the field and moved northward.

Old Harvey had chosen twenty-three of the key workers, mostly aggressive males, and had seen to it that the females received hormones before he had issued his careful instructions in silent Hive-sign.

They wanted this Outsider female alive. Nils needed the information this female carried. She was probably down among the cows. The cows could be frightened off with a low stun, but none were

to be killed. This was not a sweep—it was a search. Only the Outsider female would go eventually into the vats from this venture and she only after she had given up the necessary information.

It had been a long time since Old Harvey had participated in a hunt and he felt the excitement of it pumping in his veins. He signaled for Saldo to take the left flank and moved out of the right himself. The night air tasted of many scents—cattle, dust in the tall grass, raw earth, the subtle esthers of insects, a touch of tree resin. It was all there in his sensitive nostrils, but he could not separate out an odor that said the Outsider female was ahead of him. Nightsight would have to reveal her.

Saldo had moved immediately out to his assigned position and Old Harvey relaxed. The young man was green, but his potential was enormous. Saldo was among the twenty or so who might some day step into Hellstrom's sandals. He was one of the smaller, energy-saving new breed, dark and slim, filled with nervous energy and willingness to please, but with his own mind showing more strongly each day. He would be a power in the Hive some day—or might even take a swarm of his own out to start a new Hive.

The searchers had spread into a wide fan, walking openly down into the pastureland. Old Harvey noted that the night was good for a hunt. Clouds were beginning to cover the sky, obscuring the late-rising, waning moon. The cattle could be seen easily in the night-

sight reflection. He kept his eyes on the scattered clumps of trees, however, ignoring the cattle for the moment. They passed one small herd with a minimal disturbance of the animals, although the warm smell of the cows excited the hunter drive in the entire troop. Saldo and two others searched through the herd, making sure the animals screened no Outsider.

Hunt excitement could not be denied, though. It was evidenced by an increasing nervousness in the troop and an outflow of external hormones that began to spook the cattle. More and more individual cows and then whole groups of them snorted and ran off with a panicked thumping.

Old Harvey began to regret that he had not included a selective hormone suppressant in his preparations. The subtle chemical signals one animal could send to another had their uses at times, but they introduced complexities now. He kept his attention on the trees, however, leaving the cattle for Saldo and the others to scan. Nightsight gave his surroundings a faint silver cast, as though the light came from within every object he saw.

She will hear us coming and she will try to hide in a tree, he told himself. It's her style.

He couldn't say why or how he knew this from just his one afternoon's observation, but he felt certain of it. She would hide in a tree.

Old Harvey heard a nightbird call from far off to his right and felt his heartbeat quicken. He was not too old for the sweeps. Perhaps

it would be good to go out occasionally with the workers.

The words of Nils Hellstrom:

Unlike other creatures who struggled against their environment, the insect learned early to seek its protective embrace. He created an endless wardrobe of camouflage. He and his environment became one. When predators came he was nowhere to be found—so artistic were his methods of deception that predators could crawl upon his body in their search for prey. He did not choose merely one means of escape, but countless others. Not for him speed or the treetops, but both of these and more.

TYMIENA saw one flank of the sweep just as the first searchers saw her, confirming Old Harvey's prediction. She had tripped in a rabbit hole and sprained her left ankle early in her flight. The pain had forced her to make the climb into a low oak, where she had braced herself in a notch and taken off the shoe on the injured foot. She sat about twenty feet up, the little automatic held firmly in her right hand. A powerful pen-size flashlight was in her left hand, her thumb on its switch.

The ankle throbbed with a fiery pain that made thought difficult. She wondered if she had broken a bone.

Running cattle gave her the first indication of trouble. She heard the animals snorting above

the pounding of their hooves as they passed. Then came a mysterious *swish-swish*. The sound grew louder until it circled her tree and stopped. She could just make out the darker shadows of the hunters in the blackness. They had formed a rough circle all around her. It was obvious that she had been detected. In panic, she thumbed the flashlight switch, swept its beam in a short arc. She gasped, at her first sight of the nightmasks and stunwands, recognizing deadly menace. She began shooting without thinking.

IX

The words of Nils Hellstrom: Perhaps we will in time become as fully functional as are those we copy. We will develop faces without expression—with only eyes and mouths to keep our bodies alive. No muscles to smile or frown with—or in any way to betray what is lurking beneath the surface.

THE little automatic erupted as a monstrous surprise to the Hive's hunters. Five of them were dead before Tymiena was brought tumbling from the tree by a concentration of stuns. Old Harvey was among those killed, his nightmask shattered and a bullet in his brain. Saldo suffered a bullet burn on his jaw, but his shouted command brought order to the frightened workers. They had been full of hunt juice, as the old-timers put it, and the Outsider female's attack had raised them to

a deadly pitch. They leaped in to finish her off with their hands, but Saldo's cry of command stopped them. In the end it was Hive discipline that kept them off her.

Saldo issued swift orders. Someone must run to inform Nils. The dead must be returned to the vats. That was what good workers deserved. Thus they became one with all. Into the vats old, out of the vats new.

While his orders were being obeyed he kneeled to examine the unconscious female. Her flashlight still glowed in the grass. He pushed his nightmask back onto his head, used the flashlight to help his examination. Yes, she was still alive. It was difficult to conduct the examination calmly. He felt hate filling him. This one had harmed the Hive. Nils needed her, though. The Hive needed her. Saldo managed a kind of calm as he continued his examination. She appeared to have no broken bones. A painful ankle, obviously. It was swelling and discolored. Workers had suffered much worse, though, and had gone on with their tasks. He directed that her weapon be found and returned to the Hive.

Old Harvey's death neither saddened nor gladdened him. Such things occurred. Reality could not be avoided. Reality had placed him in command of the search troop and he was required to give correct orders. This was how Old Harvey had taught him to think and behave.

The Outsider female had to be secured first. He judged that she could be revived for questioning.

That would please Nils. It pleased Saldo now. He began to sense a greater interest in this female. She was possessor of fascinating odors. He sensed alien Outsider soaps and perfumes over faint, but familiar musks. He bent close to sniff at her, the first Outsider female he had ever encountered in the wild. Beneath the dominant acidity of her fear were exciting odors. He slipped a hand under her blouse, felt a breast, found it full and firm under a restraining garment. He knew about such garments from his training for key worker roles. It was called a bra and was fastened with metal hooks at the back. She was a true female, apparently no different from females of the Hive, and the available evidence said she was fertile. How odd these wild Outsiders were. He moved his hand down under her waistband, explored the pubic hair and genitals, brought the hand out and smelled it. Yes, fertile. So it was true that Outsider females wandered around when they were fertile. Did they go on a mating hunt of some kind as a brood mother was supposed to do? The books, the films and the lectures of his education had not prepared him for the actuality, although he could rattle off the facts readily enough. She excited him and he wondered if Nils would entertain a suggestion that she be kept for breeding. It would be interesting to breed with her.

A female in his band snarled at him then, a wordless sound of deep menace. Another said, "This Outsider female isn't a breeder. What are you doing with her?"

"I investigate," Saldo said. "She is fertile."

The one who had snarled at him found her voice. "Many of these wild ones are fertile."

The other said, "She killed five of us. She's fit only for the vats."

"Where she probably will go when we have finished questioning her," Saldo said. He spoke without trying to conceal an abrupt feeling of sadness. This Outsider female would be destroyed by the questioning—no doubt of it. It was happening to the captive male. Such a waste. Her flesh would be good for nothing but the vats.

HE AROSE, restored his nightmask to its position over his nose, said, "Bind her and carry her to the Hive. See that she does not escape. Two of you go to her vehicle. Bring it in for scavenging. Erase its tracks. No sign must remain that she and her companion were in our vicinity. See to it."

The orders came from his mouth as Harvey had taught him, but Saldo felt a form of despair that such commands were necessary. The responsibilities of leadership had fallen upon him abruptly. A remote part of his awareness realized that Harvey's choice of so young a worker as second in command on this search had been a training gesture. A promising young worker needed this experience. Another part of Saldo's awareness rested securely in his sense of competence. He was a specialist in Hive security. He trusted his own responses. He felt perfectly fitted for the task at

hand—it was as though the entire Hive were reacting through his person. Harvey had lived beyond his day, had paid for a mistake with his life. It was a serious loss to the Hive. Nils would have the news of it by now and there would be concern, but for the moment, Saldo knew he must proceed along. His was the seat of command.

"Those of you without other tasks," he said, "see that no sign of our activities remains here. I do not know all of your talents as Old Harvey did, but you know them. Divide yourselves according to your abilities. No one of you is to return to the Hive until what must be is done. I will remain until the last to inspect the job."

He stooped, recovered the flashlight he had left beside the Outsider female, extinguished it, put it into his pocket. Workers already had bound the female and were ready to take her back to the Hive. It saddened Saldo that he would not see her again. He didn't think he wanted to watch the questioning. A sudden anger at Outsider stupidity shook him. They were such fools. She deserved whatever happened to her.

Saldo glanced around at his people. They were busy obeying his orders and appeared content on the surface, but he sensed an air of uncertainty. They knew how young and untried he was. They obeyed out of habit. In truth, they were still obeying Harvey. But Harvey had made a fatal mistake. Saldo promised himself that he would not make such a mistake.

"Get down on your hands and

knees and be thorough," he said. "Two of the nightmasks were shattered. There will be splinters to recover. Get them all."

Saldo wandered up through the tall grass toward the place where two of his troop already were readying the vehicle for removal to the Hive. She had come down this way, that Outsider female. How odd it was that they wandered around freely when they were fertile, as though they had no concern whatsoever about selecting the best male for breeding. In truth, they were not like a brood mother at all. They were merely wild, fertile females. Perhaps some day—when there were many Hives—such wild females would be captured and put to proper breeding, or they would be neutered and employed in useful work.

Some of the cattle that had fled the scene of disturbance had returned, drawn by curiosity, no doubt. The animals were bunching up in the open, below the place where his troop worked, and were facing the troop. The smell of blood and the noise had left them on edge, but they offered no threat. The cattle could not see Saldo's workers, but his workers could see the cattle. Saldo held his stunwand at the ready and moved to place himself between the cattle and his troop. A good imagination could guard against the unexpected. If the cattle stampeded toward his workers, the beasts would be knocked down by one sweep of his stunwand.

Saldo paused periodically to stare across the rangeland toward the distant glow of the town, a

dim reflection on clouds. It was unlikely anyone that far away had heard the shooting, but even if some had they would be sensible. Townsmen had learned to be reticent and cautious about Guarded Valley. The Hive possessed a buffer there, too, in the person of the district deputy sheriff, Lincoln Kraft. He was Hive-born and one of the most successful fronts the Hive had ever produced. Other Hive observers moved as ordinary Outsiders in the town. There were even more important fronts in the larger Outside world. Saldo had seen two when they visited the Hive—a Senator and a judge. They filled dangerous posts which some day would not be needed.

The sounds of his troop busily carrying out his orders pleased Saldo. He sniffed at the night air, detected a smell of gunpowder. Only the Hive-trained would be likely to recognize that scent now. It was but a faint trace among many other odors.

The cattle began to quiet down and a few left the bunched herds to graze. This annoyed Saldo. Bunched up, the cows did not offer too much temptation, but he knew how disturbed his workers were. One of them could conceivably take a lone cow. That must be prevented. This would be Hive land some day—the Hive might even have its own cattle. But for now such protein cost too much in plant energy. That kind of wastefulness must be left to the profligate Outsiders and their cattle must not be molested on this night. Nothing to attract unwanted attention must occur here.

Saldo returned to his workers, moved among them, speaking in a low voice. They must not take any cattle. There must be time for the soil to conceal marks that had not been erased. No suspicious outsiders must appear here for as long as possible.

Some day, Saldo told himself, there would be other Hives, many of them sprung from this one parent which he served and which now must conceal all trace of itself from the Outsiders. For now the Hive people must be cautious and guard their future. They owed this to generations of countless workers as yet unborn.

The words of Nils Hellstrom:

Our main breeding lines must be designed with the utmost attention to Hive necessities. In this we walk a much thinner edge than do the insects who provide us with our model for survival. Their life begins as ours—by the fertilization of a single cell—but the miracle of creation differs for us from that point on. An insect can reproduce four hundred and one billion, three hundred and sixty million of his kind in the time it takes a single human embryo to develop. We can increase our Hive birthrate many times over, but never can we hope to to match this proliferation.

A WORKER came, waving to attract Saldo's attention. There was still no sign of dawnlight, but the air had turned cold, as it often did here just before daybreak. The worker stopped in front of

Saldo, spoke to him in a low voice. "Someone's coming from the Hive."

"Who?"

"I think it is Nils himself."

Saldo turned his attention in the direction indicated by the worker, recognized the oncoming figure by his gait. Yes, it was Nils. He wore a nightmask, but carried no wand. Saldo put down a sense of relief tempered by a surge of displeasure. His decisions had been the correct ones, but Hellstrom had chosen to come to see. Saldo immediately chided himself. He could almost hear the reprimand in Harvey's aging voice: *Isn't that what you would do?* The leader of the Hive could do no less. The thought restored Saldo's feeling of calm competence.

Hellstrom stopped a few paces from Saldo, examined the scene before speaking. He noted with approval that Saldo seemed to be doing what was necessary.

"Tell me what has happened," Hellstrom finally said.

"Have you had no report from the ones I sent to you?"

"They reported, but I would prefer that the leader of this search troop give me his own assessment. Sometimes workers miss important things."

Saldo nodded. Yes, the procedure was wise. He recounted the discovery of the Outsider female, the shooting; he left out no detail.

"Should your wound be treated?" Hellstrom asked, peering at it.

"It is minor," Saldo said. "No worse than a small burn."

"Take care of it as soon as you return."

Saldo heard concern for him in Hellstrom's voice, was warmed by it.

"I heard Old Harvey choose you as his second in command," Hellstrom continued.

"I was his choice." Saldo spoke with calm confidence.

"Have any of the others displayed evidence of resenting you?"

"Nothing serious."

HELLSTROM liked that answer. It said Saldo was aware of incipient challenges, but felt able to deal with them. He no doubt could deal with them, too. Saldo carried himself well. He possessed a sure sense of rightness—about him hung an unspoken air of dominance. It must be tempered, though.

"Did you enjoy being chosen by Old Harvey?" Hellstrom kept his voice flat.

Saldo swallowed. Had he done something wrong? The question had held a prying coldness. But Hellstrom was smiling faintly beneath his nightmask.

"I enjoyed it," Saldo admitted, a faint uncertainty in his tone.

Hellstrom heard the self-questioning quality in the younger man's voice, nodded. Uncertainty bred caution. One could go from liking authority into a gambler's stance, become overconfident. Hellstrom mentioned this in a quiet voice that carried only between them. When he had finished Hellstrom said, "Tell me all you have ordered to be done here."

Saldo took up his account from where he had left off. He spoke with noticeable hesitations, quest-

ing in his own mind for possible errors, for needed corrections.

Hellstrom interrupted to ask, "Who was first to see the Outsider female?"

"Harvey," Saldo said, recalling the motion of the old man's hand, the upthrust pointing finger to denote his discovery. A trickle of perspiration ran down Saldo's cheek. He wiped at it irritately and the action burned his wound.

"What orders did he give then?"

"He had told us earlier that we were to circle her when we found her. We carried out that procedure with further orders."

"What did Harvey do next?"

"He had no chance to do anything. The female turned on her light and began shooting."

Hellstrom looked down at the ground between them, glanced around. Several nearby workers had left their tasks out of curiosity and had moved closer to listen.

"Why aren't you workers doing as your leader ordered?" Hellstrom demanded. "Your leader gave you specific instructions. Carry them out." He turned back to Saldo.

"They are tired," Saldo said, defending his people. "I will make a personal inspection of their work before leaving."

This one is a jewel, Hellstrom thought. He takes personal responsibility without hesitation.

"Exactly where were you when she began shooting?"

"I was at the other end of the sweep from Harvey. When we closed the loop I found myself beside him."

"Who knocked her out of the tree?"

"The workers across from us where her light did not reach. The rest of us were dodging."

"And Harvey have no more commands?"

"I believe he was the first one hit. I heard her first shot and—" He hesitated, shrugged. "I froze for an instant. Then I was hit and we were all rushing about. I saw Harvey go down and started toward him. There were more shots and suddenly it was all over. She fell out of the tree."

"Your confusion is understandable because you were wounded," Hellstrom said. "I notice, however, that you kept your sense of balance sufficiently to prevent the killing of the captive. You lived up to my expectations. But always remember what happened here. You have had a good lesson. The hunting of an Outsider is never the same as the hunting of any other animal. Do you understand that now?"

SALDO knew he had been both praised and censured. His attention went to the tree in which the female had concealed herself, returned reluctantly to Hellstrom.

Hellstrom said, "You caught the female alive and that's the important thing." He pursed his lips. "She carried a weapon and Harvey should have anticipated that. He should have brought her down the instant he saw her. He was within range. Do you know how to use Outsider weapons, Saldo?"

"Yes. Harvey himself trained me."

"Learn to use them well. The Hive could have need of such

abilities. Let's see, you're thirty-two years old, isn't that correct?"

"Yes."

"You still could pass for a youth among Outsiders. It may be that we will send you to one of their schools before long. We have ways of doing such things. You know about this."

"I have not spent much time Outside," Saldo said.

"I know. What experiences have you had?"

"I spent a week in the town once—but not alone."

"Work or training?"

"Training for myself and others with me."

"Would you like to go outside alone?"

"I don't think I'm ready for it."

Hellstrom nodded, pleased with the candor of the answer. Saldo would make a superb security specialist. He already was far and away the most intuitively accurate among the New Breed. Give him a bit more experience and there would be none to compare with him. He possessed that beautiful Hive feeling for truth. He wouldn't lie, not even about himself. He was a leader to be preserved and nurtured. Hive conventions demanded this and the present circumstances required that Hellstrom begin that nurturing.

"You are doing very well here," Hellstrom said, speaking loudly enough for others to hear. "When the present crisis is over, we'll make arrangements to send you Outside for further education. For now, report to me when you've finished out here." He turned slowly strolled back toward the Hive, pausing occasionally to glance around. His

every movement said he was satisfied to leave matters to Saldo.

For a moment Saldo watched Hellstrom go. The Hive's First Councilor, leader in every crisis, the Prime Male—the one to whom all others turned when in doubt, even those who guided breeding and food production and tool fabrication—the chief worker among them all had come out on a fact-finding expedition and had approved what he found. Saldo returned to overseeing the cleanup with a new sense of a elation that was strongly tempered by a deeper respect for his own limitations.

X

Minutes of the Hive Council:

Interview with Philosopher-Specialist Harl (translated from Hivesign)—Once again, Philosopher Harl, we must disappoint you by telling you we have not come to take you to the blessed vats. Your great age, greater than that of any other worker in the Hive, and the artificial means we must use to keep life burning within you and all of the other reasons your wisdom uses in its arguments that we give you the release of the vats—all these are difficult to refute. We respectfully request that you cease these arguments and recall the Hive's great need for your wisdom. We come again to ask your advice on how the Hive should employ the results of a successful Project 40. We can anticipate your first question and must answer it by saying

that Project 40 is not yet fruitful. The worker specialists charged with the project say, however, that they can assure us of success. They say it is only a matter of time.

Thus the words of Philosopher-Specialist Harl: Possession of an ultimate weapon, of an ultimate threat to all of the life that shares this planet, brings with it no guarantee of supremacy. The very act of threatening to use such a weapon unless certain conditions prevail puts control of such a weapon into the hands of all those who control the conditions. You face the problem of what to do when these others say to you. "So use your weapon!" In this manner many will have the weapon. Even more to the point—anyone able to threaten the possessor of such a weapon also possesses it. Thus an ultimate weapon is useless unless those who control it can temper the weapon's violence. The weapon must have degrees of application which are less than ultimate. Take your lesson from the defense mechanisms everywhere visible in the insects who provide us with our pattern for survival. The spikes and prickles, the stingers and thorns, the burning chemicals and poisoned spears that jut angrily into the air, all these are defense mechanisms. They say, *Don't threaten me.*

bound behind her and that she was fastened securely into a chair of some kind. The chair's surface was hard and she could feel the cold smoothness of its back against her arms. The most central part of her awareness focused on her ankle, which throbbed painfully where she had sprained it. Fighting a deep reluctance, she opened her eyes, but found only an impenetrable darkness, thick and ominous. For a moment she feared she might be blind, but a faint glow insinuated itself into her awareness. The glow existed at an indeterminate distance directly in front of her. It moved.

"Ahhh, you're awake, I see."

The voice was deep, masculine and came from somewhere above the moving glow. Something about its echoing quality told her she was in a room—quite a large room.

She put down her terror with difficulty, forced a false nonchalance into her voice. "How can you see? It's pitch dark."

Hellstrom, seated in a corner of the laboratory where he could watch the glowing instruments that told him the female's reactions, admired her courage.

"I can see," he said.

"My ankle hurts like hell."

"I truly regret that. We will give you something for that presently. Try to be patient."

She found an oddly reassuring sincerity in the voice. It ranged from low to tenor and sounded under exquisite control.

"I hope I won't have to stand this for very long," she said.

She must be brought into some semblance of calmness, Hellstrom told himself. The nightmask was ir-

TYMIENA became aware quite slowly that her hands were

ritating where it pressed against his nose and forehead. He did not like the way it limned the female in a silvery glow. His annoyance came from fatigue, he knew. Sometimes the Hive demanded too much of him. But this Outsider female must be questioned and he found himself reluctant to turn her over to the merciless youngsters who always waited eagerly for an opportunity to prove themselves. He told himself that he delayed with this female because he did not trust what the others had wrenched from Depeaux. How could the Outsiders know about Project 40? One of the interrogators must have mentioned it. That had to be the answer of course. It could be tested with this female.

"First I must ask you a few questions," he said.

"Why are you keeping it so dark?" she asked.

"So you cannot see me."

A sudden elation filled her. The fact that her questioner didn't want her to see him meant she would have an opportunity later to describe him. This in-turn could only mean he meant to release her.

HELLSTROM read her reaction on his instruments. He said, "You were hysterical out there earlier. Did you think we were going to harm you?"

What does he mean by that question? she wondered. They had her tied up like a Christmas turkey.

"I was terrified," she said. "Did—did I hurt anyone?"

"You killed five of our people and injured two others."

She had not expected such a

coldly candid answer and it shocked her. Five dead? Could they actually release her after that?

"I—I felt trapped," she said. "My—my husband was not back and I was alone. I was terribly afraid. What have you done to Carlos?"

"He is suffering no pain," Hellstrom said. And that was true, he told himself. It was difficult to lie outright, even to a wild Outsider. His statement was true. Depeaux had been blissfully unconscious when his torn body had been slipped into the choppers and thence to the dissolving fluids of the vats. He had suffered no pain there and surely death had overcome him before any glimmering return to consciousness. The choppers were quick.

"Why do you have me tied this way?" she asked.

"To keep you in one place while I ask my questions. Tell me your name."

They would have her cover-identification papers, she thought. "My name's Tymiena—Tymiena Depeaux."

"Tell me about this government agency for which you work."

Her heart skipped a beat, but she managed a semblance of masked response: "Gov—I don't work for any government agency! We were on vacation. My husband sells fireworks."

Hellstrom smiled sadly at what his instruments revealed. It was true, then—both of them worked for a government agency and that agency was curious. Although he had been opaque to most of their probings, Porter had revealed as

much. But Porter had not said anything about Project 40. Would this female impart such information? He felt a quickening of his pulse. This was the kind of danger the Hive had always feared, but something in it aroused his hunt juices.

"Is your agency the CIA?" Hellstrom asked.

"I'm just a housewife!" she protested. "Where's Carlos? What've you done with my husband?"

Hellstrom sighed. It was not the CIA, then—provided her responses could be trusted and provided she even knew the connections behind her employment. It was possible she did not know. Such agencies had a proclivity for putting covers on covers on covers. "Do not worry about your husband," he said. "You will be with him soon. We know, however, that you are not a simple housewife. Simple housewives do not carry such weapons as you had in your possession. They certainly do not demonstrate the proficiency you displayed with a weapon."

"I don't believe I killed anyone," she said.

"But you did."

"Carlos insisted I have that gun. He taught me how to shoot it."

Another lie, Hellstrom observed from his instruments. He felt cheated. Why was she continuing to hide? Surely she must know by now that she had been exposed by her accomplice. His questions could not conceal this. Hellstrom had forced himself to read the Depeaux interrogation account, avoiding nothing. What the merciless

youngsters did they did in the name of the Hive. He wondered if he dared put her through a chemical reduction of personality. The youngsters argued against it. The method was painless, but uncertain. It had reduced Porter to slaving imbecility. The process tended to erase memories as it exposed them. He did not want the Porter effort repeated and decided not to listen to his own inner revulsions. What must be, must be. He would continue with present methods, however, for as long as she did not suspect her emotions were being monitored and as long as information was being gathered. The tapes were spinning to record everything that occurred here. They could be subjected to a full analysis later. Even the Hive's central computer might be helpful in the analysis, although Hellstrom tended to distrust computers. They had no emotions. Having no emotions, they failed when confronted by human problems.

"Why do you lie?" he asked.

"I'm not lying!"

"Is the agency that employs you an arm of the U.S. State Department?"

"If you won't believe me, there's no sense in my answering. I just don't understand what's going on here. You chase me, knock me out, tie me up and all for—"

"And you killed five of my friends," he reminded her. "Why?"

"I don't believe you. You'd better let me go. Carlos is a very important man in his company. There are people who'll come looking for us if I don't call them."

"If you don't report in?" Hell-

strom studied his instruments. She had been telling the truth there.

"It's not like that!"

So she was supposed to report in, probably at regular intervals, Hellstrom thought. The eager youngsters had not elicited that from Depeaux. But then, they hadn't asked.

"Why were you sent here?"

"I wasn't sent—"

"Then what were you doing here?"

SHE seized this opportunity to elaborate on her cover story: the long hours Carlos usually worked, the rare vacations, his interest in birds, her own interest in landscape painting. There was a certain delicate practicality about her account, a sense of domesticity she found herself almost wishing were true. Carlos hadn't been such a bad sort in spite of. . . She broke off her account as this thought intruded. It confused her. There was internal significance in such a thought. Why would she think about Carlos in the past tense? Carlos was dead! She felt certain of this. What had that character over there in the dark said to give her this feeling of certainty? She trusted her instincts and felt fear rising like a tide of bile.

Hellstrom saw the emotion on his instruments, tried to divert her. "Are you hungry?" he asked.

She found it difficult to speak at first, then responded in spite of a dry mouth. "No, but my ankle hurts terribly."

"We'll take care of that pretty soon," he reassured her. "Tell me, Mrs. Depeaux, if you were

frightened, why did you not drive down to Fosterville in your camper?"

That's what I should have done! she told herself. But she suspected this character and his friends had been prepared for such an attempt and *that* wouldn't have succeeded either.

She said, "I must have done something wrong. It wouldn't start."

"That's odd," he said. "It started immediately for us."

So they had the camper, too. All evidence of Depeaux and Grinelli would be gone by now. Carlos and Tymiena, both dead. A tear trickled down her left cheek.

"Are you a communist agent?"

In spite of himself Hellstrom chuckled. Then: "What an odd question from a simple housewife!"

His amusement filled her with bracing anger. "You're the one who keeps talking about agents and the State Department," she flared. "What's going on here?"

"You are not what you appear to be, Mrs. Depeaux," Hellstrom said. "There is even some doubt in mind as to whether you actually are Mrs. Depeaux." (Ah, that hit a nerve, he noted. So they were just working together and not married.) "I suspect you did—do not even care much for Carlos."

Did not care, she thought. *That's what he was going to say. He caught himself. The lie came out. . .*

She began to think back over this unseen man's every reference to Carlos. The dead felt no pain. There was a sense of over-and-done with about every mention of Carlos. She revised her assessment

of her own situation. Darkness could have another significance than hiding the identity of her interrogator. It could be a deliberate ploy to confuse her, lower her defenses. She began to explore her bindings, straining against them. They were damnably tight.

"You do not answer me," Hellstrom said.

"Why should I? I think you're awful."

"Is your agency an arm of the government's executive branch?"

"No."

He read otherwise in her responses, but it was a tempered reading. The answer probably was that she believed this to be the case but harbored her own doubts. He noted she was twisting frantically, trying to escape her bounds now. Didn't she believe he could see her?

"Why does the government investigate us?" he asked.

She refused to answer. The bindings were deceptive. They felt like leather and appeared to give when she strained against them, but when she stopped struggling even for an instant they felt as tight as ever.

"You work for an agency associated with the executive arm of government," he said. "It is a matter of curiosity that such an agency should pry into our affairs. What interest could the government have in us?"

"You're going to kill me, aren't you?" she asked.

She gave up struggling, felt completely exhausted. Her mind teetered on the edge of hysteria. They were going to kill her. They had killed Carlos and were going to kill her. Something had gone very

sour. It was the very thing she'd sensed in this assignment from the first. That damned fool, Merrivale! He never got anything right. And Carlos—the dope of dopes. Carlos had probably walked right into a trap. They had caught him and he had spilled his guts. That was obvious. This questioner knew too many things already. Carlos had babbled and they had killed him.

HELLSTROM'S instruments revealed her approach to hysteria. The fear disturbed him. He knew his reaction came partly from his own sensitivity to her subtle bodily excretions. She was broadcasting terror for anyone Hive-trained to receive. No worker could have escaped an awareness. He didn't even need his instruments. This room would have to be flushed out later. They had had to do the same thing after interrogating Depeaux. Any workers who encountered such emission would be disturbed. He still had his duty to the Hive, though. Perhaps in her fear she would reveal what he most wanted to know.

"You work for the government," he said. "We know this. You were sent here to pry into our affairs—what did you expect to find?"

"I wasn't!" she screamed. "I wasn't! I wasn't! I wasn't! Carlos just told me we were going on vacation. What have you done with Carlos?"

"You're lying," he said. "I know you are lying and you certainly must realize by now that your lies are not working with me. It will go better with you if you tell me the truth."

"You're going to kill me anyway" she whispered.

Damn! Hellstrom thought.

His brood mother had warned him that this crisis-within-a-crisis might come in his lifetime. His workers had tortured a wild human. It had been done far outside the concept of mercy—the idea had not even entered the workers' awareness as they had gone about their business of extracting information necessary for the Hive's survival. But such actions left their mark upon the entire Hive. There were no more innocents anywhere within the Hive. *We've moved a step closer to the insects we mimic*, he thought. And he wondered why the thought saddened him. He suspected that any life form that inflicted unnecessary pain tended to find its consciousness eroding. Without consciousness to reflect back upon life, all life might lose its sense of purpose.

In sudden anger he snarled, "Tell me about Project Forty!"

She gasped. Then they knew everything. What had they done to Carlos to make him tell everything? She felt icy with terror.

"Tell me," he barked.

"I—I don't know what you're talking about."

The instruments told him what he needed to know. "It will go very badly with you if you do not tell me," he said. "I wish to spare you that. Tell me about Project Forty."

"But I don't know anything—"

The instruments accorded this the value of an almost-truth. "You know some things about it," he said. "Tell me what you do know."

"Why don't you just kill me?"

Hellstrom found himself working through a haze of deep sadness, almost despair. Powerful wild humans Outside knew about Project 40! How could that be? What did they know? This female was little more than a pawn in a larger game, but she might yet provide a valuable clue.

"You must tell me what you know," he said. "If you do I promise to treat you gently."

"I don't trust you," she said.

"You have no one else to trust."

"They'll come looking for me!"

"But they will not find you. Now, tell me what you know about Project Forty."

"It's just a name," she said, wilting. What was the use? They knew everything else.

"Where did you encounter this name?"

"There were papers. They were left on a table at MIT and one of our people copied them."

Stunned, Hellstrom closed his eyes. "What was in those papers?"

"Some figures and formulas and things which didn't make much sense. But someone suggested they could be part of the design for a weapon."

"Did he say what kind of weapon?"

"I think they said a 'particle pump' or something like that. They said such a weapon could resonate matter at a distance, break glass and that sort of thing." She signed deeply, wondered why she was talking. They were going to kill her anyway. What did anything matter?

"Are—your people attempting to make such a weapon from these papers?"

"They're trying, but I heard that the papers they found were incomplete. They're not sure about a lot of things and there's an argument over whether it's really a weapon."

"They do not agree that it's a weapon?"

"I don't think so." Again she sighed. "Is it a weapon?"

"It is a weapon," he said.

"Are you going to kill me now?" she asked.

THE plaintive, pleading note in her voice sent rage erupting in him. *The fools! The utter fools!* He groped for his stunwand which he had dropped to the floor beside the instruments, found it and brought it up, setting for full charge. Those wild idiots Outside had to be stopped. He thrust the wand toward her as though he wanted to penetrate her flesh with it, let her have the full charge. The force of it resonating in the insulated confines of the laboratory stunned him for an instant and when he had recovered he saw that all of the needles on his instruments had dropped to zero. He turned on the lab's lights, rose to his feet slowly and crossed to the female form sagging in the chair. She lay slumped to her right, held by the bindings. She was utterly still. He knew she was dead before he bent and confirmed it. She had taken a charge strong enough to kill a steer. There would be no more questioning of Tymiena, whatever her name was.

Why did I do that? he wondered. Had it been the memory of Depeaux's shattered flesh going into the vats? Was it some higher demand from his Hive awareness? Or

had it been a peculiar personal quirk? He had acted in reflex, not thinking. It was done—no calling it back. But his own behavior troubled him.

Still in the grip of anger, he strode from the lab. When the eager youngsters in the outer room crowded around him he waved them aside, told them the captive female was dead. He answered their protests with curt gestures, saying only that he had learned what he needed to learn. When one of the youngsters asked if they should take the carcass to the vats or try for a sexual stump he paused for only the briefest reflection before agreeing that they should try for a stump. Perhaps some of that female flesh could be revived and preserved. If her womb could be maintained she might yet serve the Hive. It would be interesting to see a child of that flesh.

Other problems dominated his awareness, however. He stalked from the lab area, still angry with himself. Outsiders knew about Project 40! A Hive worker had been destructively careless. How had such papers been allowed out of the Hive? Who had done this? How? Papers at MIT? Who had done the research there? The Hive must learn the extent of this disaster and take quick action to ensure that nothing of this sort ever happened again.

He hoped the breeder labs succeeded in making a sexual stump of Tymiena. She had served the Hive already and she deserved to have her genes preserved.

TO BE CONTINUED

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26 DAYS ON EARTH

He had to come
home to discover
himself human.

JOE HALDEMAN

14 April 2147. Today I resolved to begin keeping a diary. Unfortunately nothing of real interest happened.

15 April. Nothing happened again today. Just registration.

16 April. I can't go on wasting paper or Earth's Conservation Board will take my diary away and process it into something useful, like toilet paper. So even though nothing happened again, I'll fill up this space with biographical detail that will no doubt be of great value to future historians.

I was born Jonathan Wu, on 17 January 2131, to Martha and Jonathan Wu II, out of the surrogate host-mother Sally 217-44-7624. My parents were wealthy enough to be permitted two legal children, but my early behavior convinced them that one was sufficient. As soon as I was old enough to travel, barely four, they packed me off to Clavius Tutorial Creche, figuring that a quarter of a million miles was a safe distance from which to monitor my growth.

Clavius Creche, it says here, was established as a uniquely isolated and controlled environment for the cultivation of little scholars. And medium-sized scholars. But when you get to be big gangling scholar, you've got to go somewhere else. There are no universities on the moon, only techni-

cal schools. You can take up Lunar citizenship—as long as you're *mutandis*—and be admitted to one of those technical schools, winding up as some kind of supercerebral mechanic. But I suppose my father was willing to live on the same planet with me rather than allow me to grow into being something other than a gentleman.

I got back to Earth one week ago today.

17 April. We began course work today. This quarter I'm taking supposedly parallel courses in algorithmic analysis and logical systems. If I ever get "introduced" to Boolean algebra again I'll curl into a ball and swallow my tongue. Continuing readings and analysis in classical Greek and Latin. Supposed to do preliminary readings for next quarter: XXth Century English and American Poets and Commercial Literature as a Cultural Index. This will be with Applied Stochastic Analysis and Artificial Intelligence I. The poetry is amusing but the "commercial" novels make tedious reading. One has always to keep in mind that none of these authors was born with the benefit of genetic engineering and they were at best men of unremarkable intelligence in a world populated with morons and worse.

Earth gravity tires me.

18 April. I was talking with my

advisor (Greek and Latin) Dr. Friedman and complained about the sterility of this upcoming literature course. He introduced me to the work of an Irish author named Joyce, lending me a copy of the construct *Finnegans Wake*. It has taken me ten hours to read the first thirty pages—totally immersed in it through lunch and dinner. Fascinating. Easily equal to the best of Thruman—why weren't we given Joyce at Creche?

I am required to walk for at least two hours every day in order to become accustomed to the gravity. Thus I am writing this standing up, the diary propped on a bookshelf. Also must eat handfuls of nauseating calcium tablets and will have to walk with braces until my leg bones have hardened. Had I stayed on the moon another five years I probably never would have been able to return to Earth (a prospect which at present would not bother me a bit).

The braces chafe and look ridiculous in this foppish Earth clothing. But I get a certain notoriety out of being such an obvious extraterrestrial.

My father called this morning and we talked about my courses for a few minutes.

19 April. Today was the first day I ventured outside the campus complex on foot. It gave me an uncomfortable feeling to be outside without suiting up. Of course, one

does wear a respirator (even inside some of the buildings, which leak), and that does something to allay the agoraphobia.

How will I react to the geophysics course next year? The students take field trips to wild preserves where they work for extended periods simply under the sky, exposed to the elements. I realize that mine is an irrational fear, that men lived for millions of years breathing natural air, walking around in the open without the slightest thought that there should be something around them. Perhaps I can convince them that since on Luna this fear is not irrational, but part of survival—perhaps they will grant me some sort of dispensation—waive the course, or at least allow me to wear a suit.

While wandering around outside the campus I dropped into a tavern that supposedly caters to students. I had some ordinary wine and a bit of hashish which wasn't at all like the Lunar product. It only served to make me tired. The tavernkeeper didn't believe that I was sixteen until I produced my passport.

I got into a rather long and pointless conversation with an Earthie *mutandis* over the necessity for interplanetary tariff imbalance. They know so little about the other worlds. But then I know little enough about Earth—for one who was born here.

I was barely able to get back to the dormitory without assistance and slept through half of my normal reading period. Had to take stimulants to finish the last book of the *Georgics*. So much of it is about open-air farming that it kept bringing back my earlier discomfort.

Resolved not to smoke any more Earth hashish until I get my strength back.

20 April. Algorithmic analysis has an economy and order that appeals to me. I had, of course, planned to take my doctorate in Letters, but now I want to investigate mathematics further. My father would have apoplexy. A gentleman hires mathematicians. I made an appointment with the advising facility for tomorrow.

I am having difficulty making friends. Customs here are rather strange, but I have grown up in knowledge of that and am prepared to make any adjustment. Perhaps I am too critical of Earth society.

An embarrassing illustration: this morning for the first time I felt strong enough for sex. Thinking this would be an ideal way to begin more cordial relations with Earthies, I made a tactful suggestion of that nature to one of my classmates in Systems. She was quite indignant and wound up giving me a lecture on cultural relativism. The kernel of it, at least as applied

to this situation, was that one is supposed to go through an elaborate series of courting gestures with a prospective mate. Like a bird ruffling out his feathers and cooing. I told her this might make some sense if the ritual had something to do with predicting or promoting future sexual compatibility between the two people, which it didn't. She reacted with almost frightening force.

My father had warned me about this moral oddity, but I was given to understand that it applied only to the lower classes and, specifically, to the remaining *homo sapiens*. Certainly there is a good argument for reducing the number of unengineered births by repressing casual sexual contact, but the same restrictive behavioral patterns shouldn't be impressed on *homo mutandis*, to which group I assumed my classmate belonged. From the speciousness of her argument, I suppose it's possible it's possible she doesn't, but then how could she get into a university? Of course, I wouldn't insult her by asking.

21 April. The machine analyzed my profile and said that I had the potential for moderate success in mathematics, but that I was temperamentally better suited for literature. It advised that I continue a double course of study for as long as possible and then switch all my energies to one field or the other as

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soon as it became clear in which direction my greatest interest lay. An agreeable course of action, perhaps because of my natural indecisiveness.

I have found a friend after all. He isn't an Earthie, but a Martian, also come to Earth for "polish." His name is Chatham Howard and he was flattered that I recognized the Howard name both for its role in early Martian history and for the social rank it now represents on Mars. He is a year ahead of me, studying sociology.

22 April. Chatham took me to a party and introduced me to a number of very pleasant Earthies. I'm still sorting out the impressions, changing my ideas a little bit. Not all Earthies my age are immature provincials.

Met an interesting female by the name of Pamela Anderson. I have begun the courting ritual to the best of my abilities. I was attentive and complimentary (though she had some strange ideas, she is not unintelligent) and agreed to meet her tomorrow for the evening meal.

We kissed once. Odd custom.

23 April. Chatham and a friend joined Pamela and me for dinner at Luigi's, a restaurant that specializes in an old-fashioned cuisine called "North-American-Italian." It is more spicy than I am accustomed to, but Pamela

recommended a fairly bland dish called spaghetti with mushroom sauce. It was rather good and reminiscent of some familiar fungi dishes.

After dinner we went to a public theater and saw a drama tape that consisted mainly of views of various couples copulating. It was much the same as the tapes I'd been watching in mental hygiene classes since I was eight years old, but in this bizarre setting I found it strangely exciting.

We had drinks at the theater after the show and engaged in some bright banter. It was all quite enjoyable, but I got the impression that Pamela was not yet interested in me sexually. This was a disappointment, especially after Chatham's friend quite directly asked him to spend the night with her. Pamela was warm but extended no such invitation.

For the first time I wondered whether she might not consider me too "alien" for a sex partner. I am a half-meter taller than she and my Lunar myaesthesia is all too evident, with the braces and my quickness to fatigue. I'm also a couple of years younger than she, which evidently is rather important on Earth.

I found out in our conversation that many of the customs relating to this mating ritual are centuries old. This is an exasperating thing about Earth—in many ways they cling stubbornly to the cultural

matrix that brought them to within a button-push of destroying humanity. On the Worlds, at least we had the sense to junk it all and start over.

Sometimes it brings me up short to remember that I was born an Earthie.

24 April. Today I got lost in the middle of writing a long Turing Machine algorithm when my mind strayed to Pamela. I had to go back to the beginning and start over. Idiotic! Perhaps all this medication is affecting my mental discipline.

Continuing with analysis of the writings of Virgil, or at least those attributed to him. Obvious many of them written by somebody else.

25 April. Pamela met me, without prior arrangement, outside my Systems classroom—an encouragingly aggressive sign. But it turned out that her real interest was in learning more about Lunar mores for a paper in Comparative Sociology. We went down to the cafeteria and discussed, essentially, how different she was from me. I left feeling depressed, but with a "date" for a concert tomorrow.

26 April. The concert was on an ancient instrument called the "glass harmonica." The melodies were interesting, but the rhythms were simplistic and the harmonies progressed in a predictable manner. Yet the overall effect was moving.

I learned the most startling thing after the concert. Pamela is not *mutandis*. We went to a bhang shop with another couple and talked about the difference, the distance between *sapiens* and *mutandis*. She accused me of being ill-informed and patronizing when I talked about our obligation to guide and protect *sapiens* as they inevitably died out over the next few generations. She said she was not engineered and her children were not going to be, nor their children. She said something we had not been taught on Luna, but once it was pointed out I had to admit her argument was obvious. She maintained that there was no guarantee that genetic engineering was going to be successful in a long race and that humanity must maintain a large and pure community of *sapiens* for several centuries in case the "experiment" fails.

I privately disagreed with her contention that *sapiens* must always remain in the majority. Certainly a million or two would be adequate to the task of rebuilding the race, should all of us *mutandi* turn purple and explode. Of course her worry was political rather than biological. She was concerned that we might irrationally legislate *sapiens* out of existence—were we in the majority.

She said we had done exactly that on Luna and I had to explain patiently why we no longer al-

lowed *sapiens* as colonists. It was not prejudice, but simple logic. She was not convinced.

[Of course, this explains why I was so surprised to find that Pamela was not *mutandis*. All the *sapiens* on Luna are quite old and mentally incompetent because of a lack of correctional therapeutics in their youth. I was guilty of unconsciously projecting my attitudes toward their manifest inferiority onto Earthie *sapiens*.]

Somehow the fact that she is not *mutandis* does not make her less attractive to me. My regard for her intellectual abilities should be greater, knowing as I do now that she started out with a genetic handicap. The main thing I feel now is a vague distrust of her emotional reliability. Or do I mean predictability? It is all very confusing.

27 April. Algorithmic Analysis test tonight. Not difficult but studying for it was very time-consuming.

28 April. Pamela took me to the zoo. A tiring but extremely rewarding day. Animals are fascinating. It occurred to me that being adult—or nearly so—and seeing non-human creatures for the first time in my life might give me some unique insight. Instead of writing a long entry in this diary tonight I will begin an essay on the experience.

My feet are throbbing. Told Pamela the joke about the computer playing chess with itself and she laughed. Was this the first time I've seen her laugh?

29 April. Pamela read my essay and left, saying she never wanted to see me again. She was crying.

30 April. I have reconsidered some of the comparisons I made (in the essay) between *sapiens* and animals. They were meant to be satirical, but I can see in the light of Pamela's reaction that this intent was not clear. Rather than attempt to translate my efforts at humor into Earthie terms I deleted these passages. I sent a copy to Pamela.

Reading back, I see I have known her little more than a week. Odd.

1 May. Latin test.

2 May. Pamela visited today, bringing a male companion. She did not mention the essay.

I realized that I don't know Pamela well enough to decide whether she brought the other man, Hill Beaumont, in order to provoke jealousy in me (consciously or otherwise). I understand jealousy, of course, from my reading, but I have never felt it and believe myself immune.

Besides, Beaumont is a rather stupid fellow.

3 May. Beaumont dropped in alone today, saying that he had read the essay and complimenting me at some length on it. He is still a dull oaf, but I can't help now feeling more kindly disposed toward him. He wanted to take me out and chatter over a bottle of wine, but I pleaded lack of time. Which was true—Greek test tomorrow evening and I have neglected it lately. Much reading to do.

I asked about Pamela. Beaumont said he hadn't seen her since they left me yesterday.

4 May. Greek. Stayed in my room all day, studying, but accepted an invitation to eat with Chatham and Beaumont after the test. Quite a lot happened and even though it's after two in the morning I think I'll stay up and record it while it's still fresh in my memory.

We met at Luigi's for a light supper and wine. Chatham, of course, is always interesting, but the evening was almost spoiled for me when Beaumont revealed with a conversational flourish that he, also, was *mutandis*. In fact, he is an elected officer in a local club, the membership of which is restricted to "us." There was a meeting of the club that night and Beaumont invited me to come and speak to them, mainly on the subject of the essay about animals. He had his copy of the essay with

him. Chatham said he had a previous engagement, but urged me to go along, saying the meetings were always amusing. I didn't see any way I could gracefully decline—figured it might even be fun as long as they weren't all like Beaumont. We left Chatham to finish off the wine—an office for which he had singular talent—and slid a couple of blocks to the meeting place.

Some of Beaumont's friends have the oddest ideas about what it means to be *mutandis*. The gathering was one of the strangest affairs I've experienced on Earth.

First a man stood up and demonstrated a construct which was a poem, in Latin, written in the form of an eighty-by-eight matrix. He showed how you could perform semantic analogues of the normal reduction transformations to get various intermediate poems—none of which made much sense—and arrive finally at a matrix that was null throughout except for sum-sum-sum-sum all down the main diagonal. A puerile exercise, bad poetry and naive mathematics, but everybody seemed dutifully impressed.

Then a woman showed a "sculpture" she had made by synthesizing a large cube of piezoelectric crystal and fracturing it, in what she felt to be an artistic way, by applying various charges to different parts of the surface. That she could have arrived at a

similar end by merely dropping the thing on a hard floor did not diminish audience appreciation.

So it went for an hour and a half. My presentation was the last one and I'm sure nine-tenths of the applause I got was due to that fact, rather than to any intrinsic merit of the composition.

The disturbing part of the evening, though, was a roundtable discussion about *sapiens* and what eventually would have to be done about them. Some of the reasoning was so fuzzy that it wouldn't have done justice to a child in first-form Creche.

One thing I learned—one very surprising thing—was that *mutandi* make up only about 1% of the Earth's population. Why did they hide this fact from us in Creche? At any rate, the irrational nature of some of their proposals tonight might possibly be excused as simple "minority paranoia."

An idea that met with a good deal of approval struck me as both sneaky and foolish. There is agitation from various groups concerned with population control to make the practice of host-mothership universal and require that all people be sterilized soon after puberty, having filed a sample of sperm or ovum with the government. Thus the size of every family could be absolutely regulated by the government.

It was pointed out that this would inevitably lead to universal

manipulation of all of humanity's genetic material—reasoning that *mutandis* being manifestly superior to the rest of humanity, it was only a question of time before they held all important governmental positions. Thus assured of freedom from bureaucratic interference they would, of course, institute a program of universal genetic manipulation. For the benefit of all humanity.

Somebody brought up Pamela's argument that it will take many generations before we are sure genetic manipulation is totally safe. Most felt that it would be sufficiently proven by the time "we" have taken over.

I told them that the weakness in the idea had nothing to do with manipulation—that the universal storage of genetic material was in itself a questionable idea. For the convenience of the government all of it would probably be stored near government centers which, like any large concentration of people, get power from one source: micro-waves beamed down from the orbital solar stations. The fact that these have functioned continuously for over a century doesn't mean they are immune to breakdown. In fact, it's quite likely that if they go, it will be because of some powerful solar event that would affect all of them simultaneously. No power, no refrigeration. The genetic material, at least most of it, would thaw out and die and

humanity would have to depend on the current crop of children to reach sexual maturity and replenish the race. That crop might be small indeed if there were stringent controls on family size. There might not be enough breeders to bring the next generation up to a size sufficient to carry on civilization as we live it now.

And a power failure might not even require a solar catastrophe. It's possible that some people wouldn't like the idea of our changing all of humankind into *mutandis* and would sabotage the sperm and ovum banks without thinking or caring about the consequences.

They listened politely to my counter-arguments, but I don't think many of them were convinced. They take electrical power too much for granted here on Earth. They have lived with local failures, which meant little more than having to walk down still slidewalks for a few hours.

There has of course been only one power failure on Luna.

5 May. Knowing that Pamela has a course in Sociometrics, I contrived to spend a few hours down at the social sciences computing facility, supposedly checking out an algorithm that simulated a Turing machine. Actually I knew that it worked, having run it successfully over at the mathematics facility, but I kept putting

glitches in it in order to remain at the console.

She did show up after four hours. Luckily she was only there to pick up a printout. It was dinner time, so I escorted her down to the Union. We each got a plate of small sandwiches and talked.

I told her about my experience with Beaumont's crowd. She was amused, which for some reason made me angry at first—just because she was *sapiens*, I guess—but she jostled me about it so much that I wound up laughing, too. She admitted that this had been her purpose when she first introduced Beaumont to me—to demonstrate that not all *mutandi* were *a priori* superior examples of humanity.

In the dining hall I said hello to one of the girls who had been at last night's meeting, the one with the piezoelectric sculpture. She stared right through me and didn't miss a bite.

6 May. What a long and disturbing day. This morning I found this note in my box:

■ IT HAS BEEN BROUGHT TO OUR ATTENTION THAT YOU ARE SEEKING A SEXUAL LIAISON WITH ONE PAMELA ANDERSON, A HOMO SAPIENS ■ FRANKLY, WE ARE DISGUSTED ■ FROM OUR POINT OF VIEW THIS IS AN ACT OF SODOMY, BESTIALITY ■■ HOMO SAPIENS IS OUR ONLY

NATURAL ENEMY, THE ONLY
OBSTACLE TO THE CONTINUING
PROGRESS OF HUMANITY ■
SAPIENS IS A DIFFERENT CREA-
TURE AND TO US A DANGEROUS
ONE ■ WE DO NOT FRATERNIZE
WITH SUCH ■■ IF YOU CON-
TINUE THIS OBSCENE RELA-
TIONSHIP WITH PAMELA AN-
DERSON, BOTH OF YOU WILL BE
IN PROFOUND TROUBLE ■■ WE
WILL BE IN TOUCH ■■■ STECOM

I sought out Beaumont and, yes, he had heard of STECOM, the Steering Committee for Humanity, but never to his knowledge had ever caused anyone "profound trouble." It served mainly to protect the interests of *mutandi* in legislation, commerce and so on. He said that the organization's public stance was much milder than that represented by my note, but that he knew many of the members to hold similar views privately.

He gave me the number of the local STECOM chairman and I contacted him. He denied any connection with the note, said that whoever signed it did so without authority, asked that I keep him apprised of further developments and told me not to worry. The note was the work of an extremist. Somehow that gave me very little comfort.

I left word with Pamela's roommate, asking that Pamela call as soon as she returned from classes. She called and we arranged to meet for dinner.

We sat at a back table in Luigi's and she read the note. At first she was amused, then alarmed. She didn't think they would dare do anything to her, but they might try to harass me.

She said she thought it would be best if we didn't see each other for a while. I protested that that would be a cowardly action in response to what was already the act of a coward, hiding behind anonymity. We argued. In the course of the argument she said I was wasting my efforts anyhow, as our relationship could never be anything other than casual and platonic. We finished our meal in silence and she asked me not to walk her home.

On my way back to the dormitory, right after getting off the South Quadrant Westbound sidewalk, I had to pass a dense stand of shrubbery that threw a deep shadow over the walk. I probably wouldn't have seen my assailants even had I not been lost in brooding thought.

One slipped behind me and threw a fabric bag over my head and shoulders, then pinioned my arms behind me. The other hit me once in the solar plexus and twice on the face, then reached under the bag and tore off my respirator. They fled and I staggered and crawled to the nearest dormitory. The medic there gave me some oxygen and pasted up my one serious-looking wound, a nasty cut over my left eye. He gave me a voucher for the ma-

terials he had used, so I could return them from my dormitory's supply, lent me a respirator and sent me on my way. A classmate walked over with me to help forestall a recurrence.

As I write this my throat still hurts from breathing the sulfurous air. Good thing the attack didn't happen downtown, nearer the Industrial Park.

I'll take an extra Pain-go and retire.

7 May. I went to the campus police and they told me that an investigation would be a waste of time since there were no witnesses and I couldn't identify my assailants. I recognized the chief as having been at the meeting the other night and didn't press him.

Another note in my box. This one simply read: ■ RETURN TO LUNA ■ ■ STECOM ■. I called up the Steering Committee chairman again and informed him of this new note and of last night's assault. He became flustered but offered no worthwhile advice.

Somebody had forced his way into my room and poured soya all over my books and papers. When they were completely dry, I took them down to the laundry and used the ultrasonic dry-cleaner on them. It worked after a fashion. I hope whoever was responsible read this diary before dousing it and saw that Pamela is not enthusiastic about

my "seeking a sexual liaison" with her. Now maybe all of this will stop.

Work goes on, of course. Tree theory and yet more non-Virgil.

I toyed with the idea of trying to trace the person or persons behind the notes.

They were simple computer printouts, so the person would first have had to encode a crystal. The crystal would have to be re-filed and, if it hadn't yet been erased for another use, it would be a simple matter to find out who had last checked it out.

Simple in theory, at least. There must be five or six computing facilities on campus, each with several thousand crystals.

And for that matter, it wouldn't be difficult to have the message printed out and then code something new over that domain of the crystal, as if the message had been a glitch.

I tried to think of how I might set a trap without using Pamela as bait. My mind just isn't devious enough—or perhaps it doesn't have enough information. Since Chatham has more deviousness and information at his disposal I tried to contact him. He was out, though. He had been gone since yesterday. I settled for Beaumont.

We roughed out a plan over a bottle of wine in the lounge of his dormitory. He knew most of the *mutandi* on campus and knew which ones were the most extreme

in their views. He would meet some of them socially and bring the conversation around to Pamela and me. If the person showed any interest Beaumont would pretend to sympathize with the idea that *mutandi* should mate with their own kind—as if the characteristics could be inherited!—and since I was the one person on campus most obviously a *mutandis* I was setting a terribly bad example. Then see whether the other would suggest some sort of action.

He said he would start right away and contact me as soon as he had some results.

8 May. Solved.

Beaumont called this morning with the good news that he had found the person responsible. No one I knew, he said; the person was an agitator who had been out of school for years and rarely showed up at club meetings. The three of us were going to meet at eight tonight by the sheds on the athletic field.

I told him that I didn't like it. At least two people had attacked me before and there might have been even more involved. I was still too weak to be of any help to my side if it came to violence—and the athletic field was dangerously isolated. I wanted simply to call the police and have my enemy apprehended, but Beaumont raised the good point that, without evidence, it would just be Beaumont's word against the

other's—and the campus police were not noted for respecting the testimony of students.

He said he could get his hands on a stunner to even out the odds and would bring a recorder to catch the person in damaging statements, if he couldn't be goaded into action. I personally hoped he couldn't.

Beaumont had a regular script worked out, things for me to say to the man that were at once perfectly innocuous and calculated to make him lose his temper. Beaumont, of course, would be pretending to be on my enemy's side. I agreed, with the private reservation that I would tone down some of my side of the dialogue.

I went to my morning classes as usual, but found I couldn't concentrate for worrying. Anything could happen. This time of the year the athletic field was only airco'ed over weekends and I wasn't sure I could make it back to a building in time if they overpowered us as they did me last time, taking our respirators. There was no guarantee that the man would show up alone or with just one accomplice. The more I thought about it, the more nervous I became. Finally, around noon, I went to the police.

The chief was monumentally unimpressed. He said the whole thing sounded like a prank, an initiation into the club. He knew Beaumont and expressed the opinion that he had been manipulated, the initiators playing on his

exaggerated sense of drama.

I insisted that they had tried to harm me seriously the night before last, but the chief pointed out that I was never in real danger and that the blows seemed to have been calculated to do only superficial harm. They could have more easily incapacitated me and left me to suffocate.

Besides, he doubted that he could spare a man at 8:00 P.M., at which time most of them were patrolling the taverns and dopes shops off-campus, preventing trouble. He kept looking at the clock—I shouldn't have come at lunchtime—and finally promised to see if he could find a man to meet me there.

Some time later the chilling thought occurred to me that the chief could possibly be in with my attackers, too, and if I were the focus of some ruthless anti-*sapiens* plot my action had only put Beaumont and me in even greater danger.

I tried to reach Beaumont all day, after that thought, to tell him the whole thing was off, but he was never home. After a good deal of internal debate, I got up about 7:00 P.M. and headed for the field. After all, I had chastised Pamela for suggesting cowardly action. I stopped in a general merchandise store on the way and bought the biggest claspknife they had. I hadn't fought anybody since I was a little boy and didn't know whether, should the

time come to use the weapon I would have nerve or wit enough even to take it out of my pocket. But its weight was some small comfort.

Everything happened very fast when it happened. I walked out onto the field and saw Beaumont standing by the sheds, chatting with another man. I approached them and waited for Beaumont to start the charade. They stopped talking as I came closer and suddenly Beaumont began to laugh hysterically. The other, a muscular older man only slightly shorter than I—probably the tallest Earthie I had seen—smiled and drew a short wooden club out of his tunic.

I had the knife out and was trying to get my thumbnail into the little depression when Beaumont, still laughing, raised a stunner at me and fired.

It was very painful. A stunner confuses the neural signals to and from the part of your brain that controls motor functions. A side effect makes you feel as if your skin were being punctured by thousands of tiny needles. I fell to the ground, twitching spasmodically. My face was down, so I couldn't see, but I heard Beaumont tell the big man to use the knife instead—it would be more impressive.

Then absolutely nothing happened for a long couple of minutes. Suddenly I was turned over roughly and steeled myself for the first blow of the knife—and found myself

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looking into the face of the police chief.

He sprayed an aerosol into my face—that made the pain go away—and said his men would take me to the infirmary, to a “pattern blocker,” to cure the paralysis. He apologized for using me as bait and said he had had a man hiding in the far shed since early this afternoon, waiting for Beaumont and his friend, who had been suspected in a similar assault case some months before.

Both of them were lying on the ground, twitching as badly as I was. A large police floater drifted onto the field and two men with stretchers came out.

They loaded up the others first and by the time my stretcher was secure, the chief was interrogating Beaumont, evidently with the aid of some hypnotic. His confession was disjointed and childish vituperative, but the gist of it was this:

He had been after Pamela's attentions (he used another word, which Chaucer would have recognized) for several months, and felt he was just about to succeed when I came along. I was an egotistical child, an alien and a cripple who, to his mind, had stolen her away.

The chief questioned him further and found the Beaumont had suffered a nervous breakdown over a year before and had been under treatment until he came to the university. He admitted to several

other acts of violence and admitted knowing that he was still mentally ill but had not volunteered for further treatment because he felt that the illness was somehow allied with his genius and he didn't want to interfere with it. I felt that anything interfering with his brand of genius could only add to it, but I kept my own counsel.

The infirmary treatment only took a few minutes. I arranged with the chief to come down the next morning to file a complaint and testify, then found a phone and called Pamela.

She was fascinated, but not surprised, with the revelations about Beaumont. I went over the whole thing in some detail, and then we talked about some more general matters and finally I got down to the question of our relationship. She said with some heat that the affair with Beaumont didn't change anything, that if I knew anything about women I wouldn't even have asked and that we could still be friends but that was all—a platonic, intellectual arrangement.

While I've been writing this I've been thinking about what she said. I do know a little more about women than I knew a month ago. And a lot more about jealousy. And I've known about synergy for years.

9 May. Today I started reading up on crystalline sculpture and piezoelectricity. ★



NOEPTI- NOE

**A ruling species must
be ready to die to
preserve those it rules!**

LANDFALL—Spring One

They stepped from the shuttle almost reluctantly, a hundred and a half of them. From its zenith an alien sun cast painful brilliance against eyes accustomed to the gray-sky filtration of CityAmerica. The land that stretched from their feet was neither rolling, flowered meadow nor tender pasture. Instead they faced an unprepossessing terrain of irregular hillocks and hollows that bristled with clumps of reed and coarse grass.

This was the land they had to

bring to fruit within five and one quarter settlement years if it were to be their home. Otherwise they would be returned to Earth— and to the bottom of the planet-party list, those of them who chose to try again.

Two of them were Cortlin and Valdez.

DISCOVERY—Late Summer One: Cortlin

The traditionalists among them took their day of rest on Sunday. But it was Tuesday when Cortlin

lay on his stomach in the coarse grass, watching what he had dubbed the sick nest. Though he was hidden in the middle of a native community, he had to strain to catch the distant, low-pitched voices of its inhabitants. They numbered about three dozen humanoids, their big tacky canopied nests spread wide afield.

At last Cortlin heard stirrings within the nest. His body he burrowed deeper into the grass. His head he elevated, the woven reed camouflaging—he hoped—the fact that it was a head. A quarter-hour ago Znné had been carried into that nest, left leg jutting at an unnatural angle, pain contorting his gray features.

Now he stepped from the nest behind the female N'Rila and the broken leg was whole again.

Healed.

Cortlin caught a deep breath and retracted his head. Healed! N'Rila was a healer.

It seemed to him that the furious patter of his heart would lead the two natives to investigate. But they clumped away without sign. Not that these natives were given to signs anyway. They seemed as indifferent to the Terran settlers as to everything else. Here was a race of humanoids living without tribal organization, without land or even property codes, without passion or taboo, as nearly as Cortlin could determine.

But these people obviously had

one thing—a healer. Cortlin's previous observations of the sick nest had not been conclusive. Two illnesses swiftly reversed—but those could have been treated with herbal medicines. The stifling City-America privacy codes were tenacious. Even Cortlin hadn't yet mustered audacity to inspect the interior of that nest.

But a broken leg—that couldn't have been healed with any primitive pharmacopoeia. Glancing around, finding himself alone, Cortlin jumped to his feet and broke for the sick nest.

And stopped short, frozen in his tracks. In the clump of reeds that grew behind the nest, swaying on a short woody stalk, cloudy gold eye fixed upon him, blue and green feathers ruffled—sat a *noepti-noe*. It blinked its clouded eye, flexed out its wings in an impassive boast of power.

A bird. A parrot-sized blue-green bird with a red beak. Cortlin had seen them from a distance, had seen them rise on the sun-streaked air. He had heard native accounts of the bird's effect upon the fertility of the land, too. And there, he decided, was one other thing these primitives had. A fertility god of sorts—the *noepti-noe*.

Where *noepti-noe* chose to nest—they said—the reed clump would send up stalks hung with thick-skinned scarlet fruit. These could be eaten or drunk, depending upon the stage of ripeness. Then the stalks

themselves could be boiled and eaten, sustaining life quite out of proportion to their fibrous appearance.

But if the bird were frightened from its nest or if death came to it—whether naturally or by violence—the reed clump would wither and die. For years there would be barrenness in a radius of many yards. Even the grasses would fail to seed.

So this was the bird. Cortlin moved forward slowly. As he approached, the bird's flexings and twitchings slowly ceased. Its eyes blinked almost somnolently. Then it stood perfectly still on one leg, its left wing half-spread. The cloudy surface of its golden eye cleared and Cortlin was suddenly looking through the dilated pupil directly into something wide and deep and blood red, something that pulsed thickly.

Cortlin was scarcely aware of the rigidity of his body, of the fact that he was suddenly bathed in perspiration. Instead he was drawn totally into the eye of the bird, into the hot, pulsating presence there.

Abruptly the eye reclouded. The bird settled slowly on both feet and drew its wings prudishly about itself.

Cortlin's body relaxed, sagged. His clothes were soaked. The noon breeze blew him cold. Shivering he backed away from the bird.

Bird—nothing but a bird preening itself on a short stalk that

bulged with buds of plenty.

A bird. Cortlin turned, stumbled away, cold and stunned.

So stunned that he reached the perimeter of his own village before he remembered N'Rila, Znne, the broken leg that had healed so swiftly within the sick nest. He had discovered a healer. The fact would have to be communicated to Valdez. He would have to admit his spying activities. But the experience with the bird had overshadowed all that.

DEBATE—Autumn One

They had all heard rumors of Cortlin's discovery, but because of the tenacity of the privacy codes no one had approached him directly for confirmation. The community hall, however, was filled to capacity the Friday after late planting, the date announced for Cortlin's presentation. His words were received with a silence as absorbent as a sound baffle.

His speech was followed by the stiff debate of individuals who had lived most of their years in population-stifled CityAmerica. There the keen need for personal privacy had led to an almost pathological reluctance to speak out, to reveal the being sheltered within one, the being whose only sanctuary from pressing bodies and peering eyes was withdrawal. Debate followed two broad general lines. The mother ship had left drugs, supplies and antibiotics sufficient to meet

any foreseeable medical crisis. Both Valdez and Nims had received medical training. The mother ship had left nothing, however, that could instantly heal bodily injury. And during the months of land-working and village-raising they had all become acutely aware of the vulnerability of human flesh.

At the end of the evening Headsman Valdez was delegated to negotiate with the natives for emergency call upon their healer.

NEGOTIATION—Autumn One: Valdez.

When he sat at his secretary in the headsman's dome or when he presided at community meetings, Valdez could forget that he led his group upon an alien world. But When he stepped out under the bowl of the sky and the musty scent of the reedlands reached him he was suddenly victim of anxiety.

Today his shoulders knotted hard with it. Previous negotiations had demonstrated that these natives had no leader, no headsman, no one empowered by the others to make decisions and grant concessions. There was only a wide-flung collection of big loose canopied nests inhabited by coequals. Consequently the best Valdez could do was enter the native village and speak with whomever he found at nest. So doing, he would receive not permission, but merely indifferent acceptance of the fact that the colonists would do what the colonists

would do. All of which left Valdez with a nagging sense of alternatives unconsidered.

Moving uneasily through the nesting field, glancing obliquely into the nests, he finally found an unpromising old male sheltering from the midday sun. The old man sat with his knees drawn up to his ears. His skin was leathery and gray, his eyes large and round and dull.

Valdez squatted before the nest. The native language permitted him no greeting more eloquent than, "Morning."

"Morning," came the rather disinterested reply. The round eyes rested on him fully, but without curiosity.

Valdez sighed. It seemed no use to embroider his way to the point. "My people have sent me to ask permission to use your healer if an emergency ever arises in our settlement. Do you see that as possible?"

The round eyes blinked somnolently. "I do not see it."

Valdez was startled. "You don't?" This was not a response he had ever received before. "Why not?"

The dull eyes blinked. "Wrong blood."

Valdez allowed a suitable interval to elapse. "Pardon?"

"Wrong blood."

"Do you mean that she—the healer—works by exchanging blood with the injured person?"

The old male wagged his head unenergetically. "I do not mean it."

"Oh? Then how does she heal?"

"She puts her hand on."

Another suitable interval. "What makes her hand heal?"

The round eyes blinked. "Long time, strangeone, a healer egg was left in an unused nest beyond the perimeter of here. One person who was harvesting grass seed found the egg. That year the people needed a healer. The one person carried the big egg here and a new nest was built. We all splashed sperm on the egg. It grew bigger. It became N'Rila. That is why her hands heal the people. Right sperm—right blood."

Valdez rocked back on his heels. "You mean that your healer is half native—half you—and half something else?" The natives themselves, he knew were basically mammalian.

"The people fertilized the egg."

Valdez passed a hand over his eyes. An egg left in the field—incredible. But the orientation studies he had completed to qualify for headman had taught him that there was much that was incredible in the universe—and nothing that man could afford to reject arbitrarily. "Then if there was another egg and my people splashed sperm on it—would it be right blood?"

The old male nodded, rubbing his head noisily against his rough knees. "I see it."

"Are there often eggs?"

"There is a healer egg now."

"There is? Where?"

"In the nest beyond. It will rot there."

"But why?"

"The people do not need a healer now."

The people didn't, but the colonists did. Valdez was aware of a complex of emotions—excitement, urgency, revulsion. The suggestion that humans fertilize an egg revolted him. "Maybe it already rots."

"No. It is fresh."

"It—where did it come come from?"

"Who knows? It is there and it is big." The oldster sketched an ovoid the sized of a football.

Valdez frowned, hesitated. He knew how his men would react if they were asked to fertilize an egg. He also knew how they would react the first time someone died needlessly. "Your healer—can she bring someone back who has already died?"

There was a hint of expression in the round eyes. "Never a warm-dead one and never if death is already coming. Never."

"You mean if the death processes have already begun there's nothing she can do?"

The old male actually seemed capable of emotion. "Strangeone, if N'Rila touched and overcame death-coming N'Rila would be no healer afterward. The people would have no healer then."

"Ah." She could heal someone who lay dying, but would lose her healing powers in the process. But if eggs were readily available was that such a large price? "Are there many healer eggs?"

"There is one now."

"No, I mean how often do you find them? How many do you let rot each year?"

The old male clung stubbornly to his information. "There is one now."

Valdez sighed. "You would know if there were more?"

"I would know if more were found."

So there was scarcity. Chances were great, too, that human males would not be able to fertilize such an egg. They could not eat native foods. Nevertheless Valdez decided to take a positive stand. "We would like to have that egg."

The old male's rounded eyes again swam with expression. His head scraped his horny knees loudly. "Yes-yes, yes-yes," he muttered. Then the head became still. "There is an offering, strangeone."

Valdez' eyebrows rose. "To whom?"

"To the power. When the people take a healer egg to fertilize, they bring to the empty nest an offering of seventy-five strangled *noepti-noe*."

Valdez stared at the gray face, his jaw tightening. He had seen the *noepti-noe* soaring over the reedlands, bright and fanciful and free.

"The egg won't hatch unless you make the offering?"

"The egg will hatch, no matter. *Noepti-noe* are an offering to the power."

Valdez tried to keep indignation from his face. "My people would never make an offering of that nature. We come from a world where all the untamed birds have been offered—to one thing or another. That's a condition we cannot meet."

The old male looked almost bemused. "It is no condition. It is an offering."

"Well, it's an offering that won't be made by us."

The old male began to swing his head on his neck, abrading it noisily against his knees.

"Is anyone going to help us find that egg if we refuse to make the offering?"

The head rocked back and steadied. "C'narr'b will show you."

"And is there someone who will tell us how to fertilize the egg and care for it?"

"I see that as possible."

Valdez stared at the old man for a time. "All right. Where do I find C'narr'b?" One thing he knew. He couldn't ask his men to fertilize an egg any more than he could ask them to strangle birds. So the chore fell between himself and Cortlin.

Well, Cortlin had gotten them into this. Valdez' face set. Cortlin was going to pay the gate fee. And not in dead birds.

NEST EGG—Winter One: Cortlin and Valdez.

They squatted before the nest for a long time in silence. The egg was exactly as it had been the week before and the week before that—slightly larger and slightly rounder than a football, shell leathery white veined with blue and green.

"C'narr'b says it happens occasionally," Cortlin offered. "The fertilized egg lies dormant until spring, then suddenly grows and hatches out quite normally."

Normally? Valdez' brows rose. They had made the nest themselves, woven it from cut reeds and bottomed it with dried grasses. It was situated near C'narr'b's nest in the native settlement. They had transported the egg there tenderly and Cortlin had done his duty, emerging tight lipped and scarlet.

But the egg did not grow. Valdez' mind turned reluctantly to the matter of the offering. "What was your final figure on the bird population?"

Cortlin rubbed his jaw. "I never reached a final figure *per se*. But I think we could knock seventy-five birds from the area without starving the natives out."

Valdez sighed. "You really see a connection between the birds and land fertility then?"

"A definite correlation. I've spotted half a dozen *noe* nests with the skeletal remains of birds in them. Death was apparently from natural causes in every case. But the land

was bare. Reeds wilted. Even the grasses hadn't regenerated. If we take seventy-five birds we're going to produce a lot of barren land."

Valdez nodded thoughtfully. "We'll have to take the birds from the reedlands between native settlements—if it comes to that." Not that the natives were likely to make violent reprisal. But there was no point in working hardship on the neighbors.

Meanwhile there remained the egg, stubbornly dormant, unchanged in size since the fertilization over a month ago. His eyes returned to it. "If fertilization didn't occur, how soon will signs of decay appear?"

Cortlin grimaced. "If it didn't take, the egg's already deteriorating. And it's not going to do us any good to kill birds. We'll just have to wait until another egg comes along—maybe next spring."

Valdez' shoulders relaxed. "All right, then," he said with finality, standing. "All we can do for the time being is consider methods of netting birds in case we need them."

Cortlin glanced at Valdez. A month ago the idea of killing birds had been anathema to the headman. But there had been two orthopedic injuries in the settlement since. Two workers out of commission for an indefinite period while bones healed. The matter of the healer had come up again at the last community meeting.

"I research netting *noe* on my own, I suppose," Cortlin said. His fertilization of the egg, mercifully, hadn't been noised abroad.

"You do."

Cortlin scowled, ran a hand through his rough hair. "All right. But if we do have to make that offering, that's one thing I'm not doing alone. You're wringing just as many necks as I do."

Valdez, eyes were dark, troubled. "I'm with you—if it becomes necessary."

"Good." Cortlin stood, cast one last glance at the egg. He didn't really believe the two of them would ever kill a bird. He had never yet approached *noepti-noe* without succumbing to the paralyzing power that lay behind the normally clouded surface of the eye. He doubted he ever would. This bird's natural defenses were remarkably effective.

II

ANNIVERSARY—Spring Two.

The settlers didn't celebrate. The fields they had planted with late crops had borne nothing. Of their vegetables and grains, bred especially for this climate, for this soil, for this season, there was no sign.

Doggedly, without ceremony, they planted again. They had supplies for four and a quarter years longer on this world. They had seeds for an equal span. They would learn from this failure.

But since no one could discern its cause they found difficulty in extracting the meat from the lesson. Some of them began to have nightmares of gray skies of CityAmerica closing over them again, of the jostling bodies of billions of fellow Americans pressing them in, always in.

NATIVITY—Late Spring Two: Valdez.

The headsman sat stiff-bodied at his secretary, his eyes like empty screens. The message had come an hour ago, delivered by an anonymous native to a worker at the edge of the colony fields. "The people see it as time for strangeone to come for the healer baby."

Just that, bald and unadorned. The field worker had delivered the message to Valdez and Valdez had nearly panicked. Hatched? He and Cortlin had inspected that egg a bare week ago and it had been scarcely bigger than last fall. Now they were to fetch the baby?

Cortlin was on his way to the nest. And Valdez sat alone in his office, his eyes staring starkly at the wall, a series of monstrous infant phantasms blossoming in his mind. He and Cortlin should have confided more details to the other settlers, he realized now. During their long vigil over the veined egg in its nest, amid their apprehensions and doubts he and Cortlin had become prepared for anything. But the others—all they had been told was

that Cortlin and Valdez were negotiating the matter of a healer with the natives.

A light rattle of knuckles came at his office door. He leaped up.

His visitor was not Cortlin but Nims, commander in chief of juvenile services, which meant she taught the half-dozen older settlement children and supervised young Patry in day care of the two infants. Patry hung behind her, her face a shy moonlet.

Nims was brisk. "I understand an infant is expected, Headsman. I think I should know what provision has been made for its care."

Frontal attack was the last thing Valdez was prepared to meet at this point. "I—none." He had had an hour to initiate something anything. But he had been paralyzed by the superstitious fear that if he set gears in motion to receive a normal human infant what Cortlin would deliver was that much more likely to be a monstrosity.

Nims squared her shoulders, expressed herself with the conscious valor of a soldier preparing to enter battle. "Patry and I would like official permission, then, to install a criblet and supplies here. I have already arranged for Gomez to take over my normal duties while I look after this infant. Patry will assist me if necessary."

Slowly Valdez' tension eased. At least one of his people understood that the expected baby might re-

quire special attention. Might, in fact, best be segregated from the other normal infants. "That—that sounds like a practical arrangement," he conceded. The fact that only one thin wall would separate his office from the nursery didn't mar his relief.

Ten minutes later one portion of the headsman's dome had been converted. From the facility with which the nursery outpost was established it was apparent that Nims and Patry had pre-assembled its components.

Enter Cortlin, unannounced, hair rough, face ruddy, carrying a bundle wrapped in big reed towels. "I've got her! Where's the scale?"

Nims was on the dot with reassurances. "I'll bring it immediately if the infant is frail or if it appears there is a feeding problem."

"Ha!" Cortlin plopped his bundle into the crib, unwound towels. "Fifteen pounds is my bet. Anyone take me?"

They stared at the abruptly bared little being in the crib. She was a perfectly formed human infant, plump, bright eyes intently occupied with one tight fist. Fine hair capped her head. Her flesh was rosy and firm. She appeared some weeks beyond the newborn phase.

"Well!" Nims hefted the child professionally.

Patry's young face hovered forth from obscuring clouds. "She's beautiful."

"Absolutely," Nims confirmed.

"And very well nourished. Tell me about her diet, Mr. Cortlin."

"She doesn't have one. Yet." Cortlin's eyes flashed to Valdez. "C'narr'b says nothing until she's twenty-four hours old—and she'll let us know when that is. Loud."

Patry touched the infant's bare foot. "Does she have a name?"

Cortlin beamed. "Nilla Marie."

Valdez' eyes caught Cortlin's fatuous, new-father grin, narrowed upon the infant. The hair, what there was of it, could be construed to have a tinge of Cortlin-red. The eyes certainly were bright and Cortlin-blue. Valdez felt a painful wrenching at his deepest human preconceptions. That Cortlin could consort with an abandoned egg in a makeshift nest and months later bring forth this. . .

Nims laid the infant back in the crib. "And the mother has formally relinquished all claim to this child?"

"No worry," Cortlin bubbled, euphoric. "No mother."

Quickly Valdez launched explanations into the startled silence. "Healers are a purely local phenomenon—impossible to explain in terms of human reproduction. Actually there is no female parent present to claim the child. That means that, for the time being, she is your responsibility, Nims."

Nims raised her chin gallantly, accepting the burden.

"I don't want anyone but Patry or yourself to handle her until we've

discussed in meeting the implications of her presence and the necessary restrictions on the use of her powers—if any."

"I certainly don't propose to expose the child to the community at large," Nims replied with asperity. "Now that I have seen her I will request Mr. Cortlin to help me transfer her crib and equipment to my private quarters. I will seclude her there for observation and stabilization for a number of days, perhaps for a full week. Thereafter I will transfer her to the nursery for day care and will continue to provide after-hours mother care myself. I intend to handle this child as much like a normal infant as possible."

Valdez nodded, the weight of responsibility easing with Nims' immediate and assertive advocacy of the infant.

When the baby's equipment had been moved the two men found themselves deserted. "Thus always," Cortlin commented. "New father out in the cold, unsung, unacknowledged."

"I thought that was how you wanted it."

Cortlin shrugged enigmatically.

"Well, you can keep involved by helping me set up tonight's meeting. We'll have to get it across immediately that there are limits to that child's use—assuming she really has healing power."

Cortlin grinned, flashed the heel of his hand before Valdez' face.

"She's got it."

Valdez' glance had caught the hand in passing. "What?"

The hand returned, hovered, turned for inspection. "That gash I got last week in the field."

Valdez stared. He had seen the wound earlier today, deep, ugly, scabbed under its plastispray dressing. Now it was gone. A dozen questions concentrated on the tip of his tongue. But the enormity of the thing locked his jaw.

They had a healer.

"Guess I'm off bird patrol now. Agreed?"

Valdez could find no comment. He nodded.

HARVEST—Fall Two.

Their first harvest was a mockery. That spring they had cast bushels of seeds across their prepared lands. Weeks later a few pale seedlings had straggled up out of the soil, all of them from pulp melon stock X57. A scattering of those had actually survived the summer to bear sickly fruit. The entire harvest was carried back to the settlement in six bushel containers and left in the coolshed to keep or to rot, according to the will of providence.

The settlers themselves withdrew to their private quarters. Winter gloom fell early.

CONNECTION—Winter Two: Cortlin.

Officially Cortlin was off bird patrol. Unofficially he was still on his

belly in the mud. And it struck him suddenly that he had most of his great thoughts here. Because today as he squirmed through the stuff, angling closer to the *noe* nest in that huge clump of reeds, his progress impeded by the very luxuriance of vegetation generated by the *noe*'s presence, it hit him.

Why their fields were barren.

Their first action upon landfall had been to clear their prenegotiated farmland. They had not taken time until later to orient themselves, to learn the simplistic native language. They had simply landed and proceeded to uproot everything.

Including the reed clumps that were the natural nesting places of the *noepti-noe*. By destroying the nesting reeds they had blighted their own lands! And within days of landfall, at that.

Had Cortlin been a field worker, had he noted the birds flying up from their devastated homes, he might have made this connection earlier. But at the time he had been concerned with the supervision of the disbursement of building materials from the shuttle that had landed them on the site of the village.

Question now was, could they restore land fertility immediately by enticing the birds back? Or was the time of blight fated to run its course?

Cortlin frowned with thought. These birds were baffling. He had

yet to see the inside of a *noe* nest. Let him come too near, and a *noe* unfailingly appeared, either from within the nest or from the skies. Let him press the matter and the bird's eye cleared, its pupil dilated and Cortlin felt himself drawn helplessly into the pulsing red river that lay beneath.

That never failed to ruin his day.

Now he began a quick, wriggling retreat. Whether restoring the birds to settlement lands would make the crucial difference or not, he had to get his thought to Valdez. It was too big to carry alone.

DEBATE—Late Winter Two.

There was no debate. Neither was there any optimism. At the end of the wet season reed clumps would be dug from uninhabited lands beyond the settlement and would be replanted in the communal fields. Cortlin would make every attempt to develop a method of luring the bright birds to nest in the human fields again.

And no one would expect a thing.

"There's no point in attempting to cultivate the reedlands themselves," Valdez explained. "One—we have treaty rights only to this preserve of land. And two—the activity involved in draining and breaking up the reedland soil and preparing it for our crops would undoubtedly drive the birds from their present nests there and we'd be right back to point-go again."

Point-go was apathy, communal and complete.

JOLT—Spring Three: Valdez

Valdez was at his desk in the headsman's dome when Tagnari appeared at the door. "Accident—" he panted. Field dust had turned to mud on his sweat-soaked worksuit.

Valdez stood up. "Where?"

"Sector seventeen—Gillard, sir, under his tractor."

"Get the scooter. I'll fetch Nilla and Nims." It was a standing order that the healer was never used in emergency without Valdez' consent or without Nims in attendance. To date, luckily, there had been few non-routine calls upon Nilla's services.

The settlement's only hover-scooter bobbed across the field, dodging newly replanted reed clumps. Valdez' glance fell across the child in Nims' arms. Her hair was more brightly tinged with red than it had been even a month ago. And she was growing rapidly. Less than a year old, she had the appearance and general ability of a normal three-year-old.

But despite the uncanny power that lay in her hand she was only a child. And when he reached Sector 17 and saw the silent knot gathered in the fresh furrows Valdez hopped quickly from the cart. "Keep her here—and keep her head turned away if you have to." Until now there had been no need to present

the child with a brutally disturbing scene.

This was a bad one. Valdez made his way to the center of the knot and kneeled. And there was no doubt in his mind that Gillard was in the condition the natives called "death-coming." For one thing, his chest had been crushed. For another, both legs were mangled. The soil was bloody around him.

His wife was bloody beside him. Her dark eyes were enormous. She spat words at him: "Where is the healer?"

Valdez kept his voice low. "We can't use her here, Hil."

Hil Gillard did not keep her own voice down. It burst from her with fury. "Where can we use her then? What is she doing in our place?"

"Hil, this is exactly the situation we discussed in meeting when Nilla first came. If we permit her to touch Gil now her powers will be sacrificed. She'll be just a child like any other child and we'll have no healer. We all agreed—"

"We all sat while you and Cort agreed! I said nothing! Luis said nothing!"

Nims had slipped between them to kneel beside the injured man. She handled his wrist, touched his neck. "Headsman, this man is dead."

Hil Gillard was briefly silent. Then she sprang at Valdez.

The tussle was brief. Pulled from the headsman, she glared at them all, hands and face dark with her

husband's blood. Then she wheeled and flung across the field toward the reedlands.

"Tagnari—keep her in sight." Valdez turned to Nims. "Nilla?"

"I instructed her to wait at the scooter."

Valdez nodded. The knot around Gillard had loosened. "We'll have to transport him back to the settlement."

"I believe we must first wait until final death occurs," Nims said quietly.

Valdez' head snapped up. "I thought you said he was dead."

"He is, for all practical purposes. However, there is still a faint pulse."

Valdez stared at her.

"I could see no point in torturing Hil, Headsman. Would you like me to call Nilla to confirm my judgement."

Valdez licked his drying lips. "I—no. No." He himself had seen that death was with them. He squatted, took up the limp wrist.

Several minutes later the erratic pulse was gone. Valdez stood. "Now we can think of moving him." But no one moved, least of all Valdez. It was time, he saw, publicly to assign Cortlin the job of obtaining another healer egg.

BIRD PARTOL—Summer Three: Cortlin

But healer eggs were out of season and Cortlin had other irons in his fire. He stood beside his

newly erected dome in the far corner of the settlement fields. The prospect across the fields was broken now by scattered clumps of reeds.

The reeds were a failure. The birds had refused to be lured to the human lands. The reeds—Cortlin had necessarily chosen clumps uninhabited by *noe*—had survived transplantation to wither a few days later of the *noe* curse that afflicted the settlement lands.

Doggedly the settlers replaced a half-dozen clumps each day. But even the fresh clumps attracted no birds.

Cortlin ran a hand through his rough red hair, turned a glance upon the dome he had erected, his birdatory. It encompassed three freshly transplanted reed clumps, a corresponding amount of bare soil and it was off limits to every human but himself. Stone markers carried the boundaries of his private preserve some yards beyond the dome itself.

He heard a harking cry from the reedlands. C'narr'b appeared with birding net, an implement with a handle of reed stalk and a drawstring bag of woven grasses. In his other hand he carried a small, densely woven bag.

Cortlin met him. He had inspected the bird net previously. Now that he was ready to go into the field, however, the implement looked ridiculously fragile. "The *noe* doesn't struggle at all?"

"Never." C'narr'b was a stringy old fellow, fast on his feet and muddy gray. He had large round eyes and a mouth bulging with horny yellow chewing surfaces.

"I hope he doesn't change his mind today."

In the no man's land between native settlements the reeds grew in great mounds with coarse grasses flowing between them. Spotted throughout the wilderness were decrepit native nests used as occasional retreats or for shelter when bad weather overtook seed gatherers.

"The people take *noe* only from places where the birds nest thick," C'narr'b explained. "The land is not stripped then. There are other *noe* near to keep it."

Deep in the reedlands Cortlin and the native selected their clump and moved through the grassy growth toward it. Alerted, a single *noe* appeared from his nest at the heart of the clump. He hopped to a reed stalk and bobbed there nervously, his cloudy golden eye blinking rapidly.

C'narr'b took his bearings and then pulled the densely woven grass bag down over his head and face. "Run beyond reach of the power now."

Cortlin quickly scrambled away. He called the go-ahead when he was safely situated. The native advanced cautiously, long toes gripping the ground, bird net held erect.

"To your right," Cortlin called

when C'narr'b deviated slightly.

On its perch the bird flexed its wings and uttered a warning cry.

Then the bag-blinded native was within net's reach. "Net forward," Cortlin called.

The grass net reached. The bird seemed to see it for the first time. The *noe* bobbed nervously, uttered one last cry and became still.

"Net up and to your right."

The bird went into a crouch. One wing flexed out slowly. Cortlin tensed. But when the clouded lens of the bird's golden eye cleared, when its pupil dilated, he was unaffected. He was beyond the range of the bird's paralyzing power. He made a quick mental note of his distance.

Now the native's net hovered directly over the bird. "Net down!" Cortlin's voice rose. "Now—pull your drawstring."

The *noe* was bagged. And it didn't struggle. Its feathered body relaxed in the closed net. Its golden eyes clouded and shut.

Cortlin approached apprehensively. "Did we hurt him?"

"The bird is not hurt."

"And he isn't going to turn on the power again?" It couldn't be this easy.

It was. "There is always one last flash of power. Then the bird is quiet. For when he sees the net he understands he is being taken for sacrifice."

Cortlin stared at the bright, bagged bird. He found it difficult to

believe the bird held any such preconception. "And you've never tried keeping a bird? For observation?"

"Observation of what?" the native wondered, round-eyed.

Cortlin shrugged. These people seemed to suffer no pangs of curiosity.

He himself suffered other pangs—those of apprehension. How long would it take this bird to recover from the passive state? Would it? If it remained passive, would it eat and take water? Or would it dehydrate and starve in his painstakingly erected birdatory, leaving him with a handful of feathers and three clumps of wilting reeds?

As they pushed through the reeds Cortlin's eye was on the bird. He began to wish that population pressure in CityAmerica had not rendered his education so brief, so perfunctory.

But what specialized knowledge could serve him now? Bird psychology?

III

NEST EGG II—Early Autumn Three: Cortlin

Cortlin moved through the fields at mid-morning. Across the broad prospect of settlement land a few pale melon vines crawled between withered clumps of reed. An occasional stalk of stunted corn threw a

brief shadow. Rather than work this taunting harvest the settlers had elected to search the reedlands for healer eggs. Cortlin fervently hoped Valdez' effort to save them from total apathy would succeed. A few weeks ago, with the same end in mind, Valdez had space-called EarthAuthority and urgently requested a fresh shipment of seeds.

The reply had been swift and brutal. The seeds shipped with the settlers had been scrupulously fresh and carefully bred for local climate and soil conditions. This group of settlers had the same choice as any other group of settlers sponsored by EarthAuthority—make their planet yield or return to Earth.

Cortlin sighed, glancing at wilted reeds. The field workers had balked by midsummer, at the constant transplantation of fresh clumps. And the dozens of *noe* he and C'narr'b had netted and tried to settle in the fields had long since taken to the sky.

Only the three *noepti-noe* consigned to the closed dome of the birdatory remained. They behaved most *unnoely*. They ate, drank and sat on their perches, bobbing their bright heads monotonously. Cortlin was permitted to touch them, to handle them, to inspect the nests they had woven with materials he had gathered. Not once since capture had a *noe* cleared the cloud from its eye and paralyzed him with enigmatic red power. Neither had any *noe* attempted escape.

Still awaiting sacrifice? He wondered.

The boundaries of his private preserve marked a sharp change in crop status. Here it had been necessary to thin stalks and vines to maintain a path to the door of the dome. Inside the dome the situation was even greener. His tomato crop prospered. Big red globes hung waiting. He studied them without expression, then slung the bag off his shoulder, picked the day's yield and set it outside.

His birds greeted him with their usual total reserve. He waded the tomato patch and took their water trough to be refilled with odorous reedland water, the only liquid they would accept. Food and water attended to, he approached each nest in turn, spoke to each bird, was greeted by each with an aloof golden stare.

He was greeted, too, at the third nest, by an egg—a leathery white egg smaller than an Earthside hen's egg, vividly veined with blue and green. Cortlin's heart took a brief vacation. He stared at the egg. Despite its size it had a terrifyingly familiar look. With stiff fingers, he touched it.

It throbbed.

He looked up and found its parent eyeing him. His lips began to shape a question. Before he voiced it the cloudy golden surface of the bird's eye cleared. The dark pupil dilated. And Cortlin fell into a hot, red stream of power that beat and



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Think about it.
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pulled at him with a thick, strangling rhythm.

Then the bird was a bird again and Cortlin was able to move his tortured muscles. He stared at the creature on the perch. His lips were stiff. "Who are you?"

The bird made no answer.

Impulsively Cortlin reached into the nest and seized the little egg. He held it in his palm, feeling the hot throb of it. "I'm going to take your egg."

The bird twitched and began to clean its feathers.

"I'm going to take your baby and hide it."

He did. He found a native nest near the edge of the settlement fields and left the little white egg there. The palm of his hand throbbed as he walked away from it and in his head was a pain. And he had just one fervent wish—that no *noepti-noe* ever lay an egg in his birdatory again.

When he went back next day the little egg had grown. It was a medium size egg. Two days later a search party found it and carried it triumphantly home. It was the size of an underinflated football by then.

ACTIVITY—Winter Three

The notable feature of the previous winter had been apathy. The notable feature of this one was activity.

Two things had happened that fall. First a search party had dis-

covered the healer egg and turned it over to Headsman Valdez and his special assistant, Cortlin. Next, and almost simultaneously, the melons, squash and corn planted around Cortlin's bird dome had suddenly spurted. The effect had extended slightly beyond the stone border Cortlin had laid to mark his territory. The resultant harvest was not by any standards staggering, but it was far more substantial than any they had experienced on this world to date.

Now, in the cold and wet of winter, parties brought cut grasses, reeds and reed stalks from the reed-land areas. These were being dried in every available spot, including private quarters. Not a settler could be found who didn't carry the musty reed smell on him. Because there were not sufficient artificial materials to erect bird domes over the entire span of settlement fields it was necessary to weave large cages of natural materials to house the *noepti-noe* they would net from the reedlands that spring.

They needed almost one hundred such cages. The settlers were busy.

NATIVITY II—Spring Four: Cortlin

Knowing what he did, Cortlin expected to find the second healer infant alien. But she was very much like any human infant when he lifted her from her burst shell in the native village. Her hair was darker than Nilla's. Her eyes were darker,

too, but alert and blue. She was smaller than Nilla had been, wirier. But he could find nothing alien in the cast of features or in the thrashing activity of small limbs.

Nevertheless, as he carried her toward the settlement, he was the victim of deep misgivings. He reached the edge of the communal fields. Already two dozen fresh reeds clumps had been planted and capped with big handmade cages within which *noepti-noe* perched placidly. Cortlin felt threatened by their bright-feathered proximity. What he understood about these birds, he realized, was quite insignificant in comparison to what he had yet begun to comprehend.

TROUBLING THOUGHTS— Summer Four: Valdez

Valdez shook his head thoughtfully, his eyes intent upon his companion. He remembered the Cortlin of four years ago. Open-minded, driven by curiosity, he had been the colonist least constrained by the inhibiting privacy codes. But as the others had gradually opened up Cortlin had withdrawn, had begun to spend more time alone, burdened with inward occupation. His face reflected this change.

"No, Cort, I see what we've done with these birds as a parallel to the domestication of, say, cattle and oxen. We've harnessed their productivity to our own ends—even if we don't fully understand its source."

The settlement fields were lush and green this summer, thick with growth.

Cortlin ran an expressive hand through his hair. "What I'm trying to get across—you're drawing parallels that would apply if we were on Earth. But we're here. And those birds aren't oxen. They're—do you you know why I think they're sitting there in their cages? Just sitting?"

Valdez shook his head.

"I think they're waiting to be sacrificed," Cortlin said.

Valdez frowned. "I really don't see how a bird could comprehend a concept like that, Cort."

"Neither do I. Sometimes I think these birds may be the real high-order inhabitants of this place. And I think it may be the natives who are domesticated in some cockeyed way we can't understand—just as we can't understand the birds."

Valdez carefully avoided the use of Cortlin's own word—cockeyed. "That's an odd way of looking at things. If that were the case, why would the birds—the higher-order life form—permit themselves to be captured and strangled by the natives?"

"Because they need the natives. They have to keep them operating at top efficiency through the healers."

"Which they could accomplish without sacrificing themselves. We've proved that, you know. We have two healers, both working out

beautifully—and we've sacrificed no birds."

Cortlin made a nervous gesture. "That's just it, Val. The pieces are scattered all over the board. I can't fit them."

"Mmm. Maybe you're trying to assemble too many different puzzles on the same table. Or maybe there are key pieces on the floor under the table." Valdez' eyes leveled with Cortlin's. "Or maybe you're one of those people who can't handle prosperity. You expect the worst—and you're more upset when it doesn't come than when it does."

Cortlin shook his head emphatically. "No. I'm just trying to put things together, that's all."

When Cortlin had gone Valdez sat troubled. Nilla had shown ability to deal with manic depressive psychoses and schizophrenia. But if this emotional syndrome Cortlin evinced were not firmly based in physiological causes, could she counter it?

Valdez found it impossible to remain troubled long. He himself had no complicated reaction to good fortune. The fields blossomed. The settlement blossomed. His own wife blossomed. Their first child would be born before winter. It was not difficult to reject Cortlin's forebodings.

BUMPER CROP—Fall Four: Valdez

A week to ten days? Valdez

looked out over the prospect of fields and wondered why Cortlin had insisted that the harvest would be delivered so soon. The corn was immature. The melons were small and hard. The other crops were in a corresponding state of unreadiness, except for the tomatoes. But Cortlin had seemed quite positive—as well as agitated. And the plants themselves, although their fruits were immature, grew thick and dark and full of vigor.

Well, if Cortlin's prediction were reliable, if these crops were about to spurt as the plants in and around Cortlin's dome had spurted last fall, it was fortunate they had completed the hose system. Because it had been five weeks since rain. These plants needed water if they were readying for a precipitant growth and ripening.

Standing with hose in hand, Valdez experienced one of his increasingly frequent moments of deep satisfaction. There was a feeling of community in the fields today. Everyone had come out for the initiation of the hose system except the youngest children and their attendants, Patry and Bonds. The feeling of communal exuberance was an airborne tonic.

Their first major crop was on its way.

Valdez' mood did not alter appreciably when word came that he was required in Sector 23. "On my way." He laid down his hose, dried his hands on his worksuit and loped

casually across rows of green.

When he reached 23 he realized that misfortune was possible even today. Nims lay unconscious on the ground in the shade of a reed clump. Her older pupils clustered anxiously around her.

"We pulled her over here when she fell down. We thought it might be heat stroke."

Valdez examined his fallen commander in chief of juvenile services. He didn't like what he found. "How did she fall?" he demanded sharply. "Easily or hard?"

The oldest child answered. "She was standing there telling us—telling us about things—and then she fell hard. It made a noise."

Valdez glanced around quickly for an implement or clod that might have rendered her unconscious had she struck her head upon it in falling. There was nothing. Nor was there any wound upon her head.

"Did someone go for Nilla?"

"Cort did."

Valdez nodded, staring at the still woman. He had no one with whom to share his apprehensions. The only other member of the party who had gone through the medical course lay at his feet.

Her students were eager to help. "Downy thought we should wash her face with cold water."

Valdez shook his head. "I don't think that would help."

The hover-scooter appeared, bobbing, bearing Cortlin, Patry, Nilla and the younger healer, Kinnie.

Nilla, at two and a half years, had the stature and composure of a ten-year-old. She kept that composure when she saw her adoptive mother lying inert on the wet ground.

And why not? Valdez mused. To Nilla illness was not tragedy, not even cause for minor anxiety. Illness was simply a condition to be neutralized. "I think the trouble is in her head," he explained.

Accordingly the child applied the back of her right hand to her mother's head in a diagnosing caress. Briefly she shut her eyes.

Then, instead of turning the hand to apply the healing power of the palm, she drew it back. Her eyes opened. They held a small flicker of expression. "She has a clot closing up a big blood vessel in her brain. It's been there too long now."

Valdez flinched. Only minutes had elapsed, but the final death processes were already underway.

"Do you want me to take care of it?" Nilla asked hopefully.

He stared at her. But of course—why did they have a second healer if not for an emergency like this? He wondered briefly if his own son or daughter would ever know fear in the presence of near-death—or would instead regard it casually as a reversible state.

"We can use Kinnie if you'd rather." The child understood that her powers would be lost if applied in circumstances like these.

"No, it's all right. I don't mind."

He saw that she meant it. That

she understated, in fact. "All right, Nilla. Take care of her please."

The child's face became still, all attention focused inward. Her hand reached out again, rested palm down on Nims' head. Valdez watched intently. Usually when she applied her palm she briefly closed her eyes. This time she didn't.

Valdez didn't realize what was happening until it had already happened, until the dark pupils of Nilla's eyes had opened and he found himself pulled downward into something red and gluey and hot that throbbed. Helplessly he felt his body stiffen convulsively, heard his spine pop in protest. . .

. . . heard Cortlin groan thickly, "No!"

He heard something else, too, what seemed an age later. Alien cries rose from the fields all around, hoarse and penetrating cries of scalding agony.

He had no way of timing his paralysis. But finally the pupils of Nilla's eyes closed and the red power was shielded. And Valdez was able to move his body.

He was peripherally aware that Nims stirred. But more he was aware of a last dying shriek from the fields. His eyes went to Cortlin's, met another agony there.

"The *noe*?" he whispered numbly.

Cortlin, too, was stunned and slow. "They've been sacrificed," he said thickly. "They were waiting for it." Cortlin rose to his feet,

stumbled to the nearest reed clump. He pulled back the big cage and reached into the nest. The bird he brought forth was limp, its bright feathers tarnished, its eyes bulging. Cortlin stared at it, then shook it. "Who are you? *Who are you?*?"

The bird didn't answer. It was dead, as were most of the others that had been brought to nest in the settlement fields.

Valdez began to shake helplessly. Because he knew that if his ears were keener, he would hear another sound from the fields. He would hear their stalks and vines shriveling in death, taking their immature fruits with them.

DEPARTURE—Summer Five: Valdez

The shuttle sat at the edge of the field. Nims turned as she boarded, raised her hand in farewell. Valdez returned the salute. His brisk little commander in chief had been firm in her refusal to chance imposing a second life-or-death decision upon him.

The more than seven dozen others who accompanied her on the return trip went for a different reason.

"We're well off without them," Cortlin observed.

Valdez nodded, reluctantly agreeing. After the fall crop disaster the community had divided sharply. Half his people had retired to their private

quarters and put forth no further effort. Unable to cope with the scope of the disaster or with the fact that there was no comprehending the forces behind it they had refused to do more than exist until the shuttle came for them.

But others had been mobilized by crisis, had worked like oxen, disposing of the seventy-five dead *noe*, digging out the reed clumps that had followed them in death, plowing under the withered crops. Bringing in more reeds, more *noe*, doggedly planting late crops.

The late crops had delivered. Now there was food to carry them through summer and fall—those who were staying. And they were willing to accept that slim margin of survival.

The shuttle captain was a conscientious man and worried. "You understand there won't be anyone back this way for another five years, Head. And I'm not authorized to leave you any more food supplies."

"We understand. We've discussed it in meeting."

"All right. Sign and we'll unload."

Gravely Valdez signed for herds of embryonic sheep and cattle, for equipment to carry the embryos to birth-stage and for concentrated feed to maintain them through their first year, until the seeds that accompanied them could be parlayed into feed.

The livestock was unloaded.

Then the shuttle closed its doors and pulled up into the sky, becoming a bright fleck in the distance.

When it was gone Valdez' eyes moved over their world, over fields green with crops, over the domes of the settlement, over the reedlands. He was keenly aware that there were just sixty-odd of them alone on a world they had barely begun to understand. He was even more keenly aware of the presence of the birds in his fields.

"You ever wonder what they'll find when they do get back?" Cortlin mused.

Valdez studied Cortlin. His bird expert had changed again. "You know, once the worst happened, Cort, you cheered up."

Cortlin smiled. "What makes you think the worst has happened?"

Valdez looked out into the fields. He still held a vivid memory of Cortlin's question the day of the crop disaster: *Who are you?* It repeated itself in his mind every time he met the golden eye of the *noepti-noe*. And he knew it was a question he was unlikely to see answered. "Well, I'm hoping we know everything now that can harm us seriously."

"Hope you're not counting on that too hard."

"I'm not," Valdez admitted. The only thing he was counting on was that the gray skies of CityAmerica would never close over him again. He walked under open sky. ★

Free as the photon gales,
Grimes was still haunted
by his genetic heritage!

A. BERTRAM
CHANDLER



THE DUTCHMAN

I

GRIMES was packing his overnight bag without much enthusiasm.

"Do you have to go?" asked Sonya.

He replied rather testily, "I don't have to do anything. But the lightjammers have always been my babies and I've always made a point of seeing them in and seeing them out."

"But Coldharbor Bay? And in midwinter? There are times, my dear, when I strongly suspect that I married a masochist."

"If only you were a sadist we'd live happily forever after," he retorted. "And if you were a maso-

chist you'd be coming with me to Port Ericson."

"Not bloody likely," she told him. "Why you couldn't have arranged for your precious lightjammers to berth somewhere in what passes for the Tropics on this dismal planet is beyond my comprehension."

"There were reasons," he said.

Yes, there were reasons, one of the most important being that a lightjammer is a potential superbomb with a yield greatly in excess of that of the most devastating nuclear fusion weapon. The essential guts of a star-sailer is the sphere of anti-matter, contraterrene iron, held suspended in vacuum by powerful magnetic fields. In theory

there is no possibility that the anti-matter will ever come in contact with normal matter—but history has a long record of disasters giving dreadful proof that theory and practice do not always march hand in hand. The terminal port for the lightjammers, therefore, was located in a region of Lorn uninhabited save by a handful of fur trappers. It would have been at the South Pole itself but for the necessity for open water, relatively ice-free the year around, to afford landing facilities for the ships.

The first of these weird vessels, *Flying Cloud*, had been an experimental job designed to go a long way in a long time, but with a very low power consumption. The most important characteristic of anti-matter—apart from its terrifying explosive potential—is anti-mass. A ship with a sphere of contraterrene iron incorporated in her structure is weightless and inertialess. With her sails spread to the photon gale she can attain an extremely high percentage of the velocity of light but cannot, of course, exceed it.

The crew of *Flying Cloud* had been, putting it mildly, a weird mob. Somehow they had become obsessed with the idea of turning the vessel into a real faster-than-light ship. (The conventional starship, proceeding under inertial drive and Mannschenn Drive, is not faster than light, strictly speaking; she makes light-years-long voyages

in mere weeks by, as it has been put, going ahead in space while going astern in time.) This desirable end they attempted to achieve by means of a jury-rigged rocket drive, using home-made solid fuel, just to give *Flying Cloud* that extra nudge.

Fantastically, the idea worked, although it should not have. Not only did it work, but there were economically advantageous side effects. The lightjammer finished up a long way off course, plunging down to apparently inevitable destruction on Llanith, one of the planets of the anti-matter systems to the galactic west of the Rim Worlds. But a transposition of atomic charges had taken place. She now was anti-matter herself, whereas that contraterrene iron sphere was now normal matter.

Flying Cloud had landed on Llanith and had been welcomed by the people, human rather than merely humanoid, of that world. She had remained on Llanith until the Llanithian scientists and engineers had worked out just what had happened and why. (The attitude of the scientists at first had been that it couldn't possibly have happened.) Then, after modifications had been made to her control systems and the makeshift rocket replaced by a properly designed reaction drive, she had returned to Lorn, carrying not only a sample shipment of trade goods but passengers from the Llanithi Consortium.

And Rim Runners, the shipping line of the Rim Worlds Confederacy, had a new trade.

GRIMES sat in the forward cabin of the Rim Runners' atmosphere ferry that somebody had called—the name had stuck—the Commodore's Barge. He was not handling the controls himself. His old friend and shipmate Billy Williams, master of the deep-space tug *Rim Malemute*, was piloting. Grimes was admiring the scenery.

The landscape unrolling beneath the barge was spectacular enough but cold and forbidding. Lake Misere was well astern now and the craft was threading its way over and through the Great Barrens, skirting the higher, jagged, snow-capped peaks, its inertial drive snarling as Williams fought to maintain altitude in the vicious downdrafts. The big man cursed softly to himself.

Grimes said, "You would insist on coming along for the ride, Billy."

"I didn't think you'd make me drive, Skipper."

"Rank has its privileges."

"No need to rub it in. If it's all the same to you I'll take this little bitch down through the Blackall Pass. It's putting on distance, but I don't feel like risking the Valley of the Winds after what we've been getting already."

"As you've been saying, you're driving."

Williams brought the barge's head around to port, making for the entrance to the pass. The opening was black in the dark gray of the cliff face, a mere slit that seemed to widen as the aircraft came on to the correct line of approach. And then they were plunging through the gloomy, winding canyon—the tortuousness of which was an effective wind baffle, although the eddies at every bend made pilotage difficult. The echoes of the irregular beat of the inertial drive, bouncing back from the sheer granite walls, inhibited conversation.

They broke out at last into what passed for daylight in these high latitudes, under a sky which, on this side of the ranges, was thickly overcast. Only to the northwest, just above the featureless horizon of the Nullarbor Plain, was there a break in the cloud cover, a smear of sullen crimson to mark the setting of the Lorn sun.

They flew steadily over the desolate tundra through the gathering darkness. The lights of Port Erikson came up at last, bright but cheerless. Beyond them Grimes could see the tiny moving sparks of white and red and green that must be the navigation lanterns of the small icebreaker that, in winter, was employed to keep Coldharbor Bay clear of floes and pack ice.

"Too bloody much seamanship about this job, Skipper," remarked Williams cheerfully.

"No such thing as too much sea-

manship," retorted Grimes huffily. He pulled the microphone of the VHF transceiver from its clip. "Astronautical Superintendent to Port Erikson. Can you read me? Over."

"Loud and clear, Commodore. Loud and clear. Pass your message. Over."

"My ETA Port Erikson is ten minutes from now. Over."

"We're all ready and waiting for you, Commodore."

"What's the latest on *Pamir*?"

"ETA confirmed a few minutes ago. 2000 hours our time."

"Thank you, Port Erikson. Over and out."

Ahead was the scarlet blinker that marked the end of the airstrip. Williams maintained speed until the flashing light was almost directly beneath the barge, until it looked as though they must crash into the spaceport's control tower. With only seconds to spare he brought the aircraft to a shuddering halt by application of full reverse thrust, let her fall, checked her descent a moment before she hit the concrete.

Grimes decided to say nothing. After all, he himself was frequently guilty of such exhibitions and all his life he had deplored the all-too-common *Don't do as I do, do as I say*, philosophy.

GRIMES and Williams waited in the control tower with Captain Rowse, the harbormaster. (In a normal spaceport his official title

would have been port captain, but a normal spaceport does not run to a harbor, complete with wharfage and breakwaters.)

"She's showing up now," announced the radar operator.

"Thank you, Mr. Gorbels," said Rowse.

The VHF speaker came to life. "*Pamir* to Port Erikson, *Pamir* to Port Erikson. Am coming in. Over."

Grimes recognized the voice, of course. Listowel had been master of the experimental *Flying Cloud* and was now in command of *Pamir*. A good man, not easily panicked, one who would have been just as at home on the poop of a windjammer as in the control room of a spaceship.

The commodore moved so that he could look up through the transparent dome that roofed the control tower. Yes, there she was, her navigation lights bright sparks against the black overcast, white and ruby and emerald, masthead, port and starboard. (Her real masts were retracted, of course, and her sails furled. She was driving herself down through the atmosphere by negative dynamic lift, a dirigible airship rather than a spaceship.) Faintly Grimes could hear the throb of her airscrews, even above the thin whining of the wind that eddied about the tower.

The ship was lower now, visible through the windows that overlooked Coldharbor Bay. Grimes

lifted borrowed night glasses to his eyes, ignoring the TV screen that presented the infrared picture. The slim, graceful length of her was clearly visible, picked out by the line of lighted ports. Down she came—down, down, slowly circling, until she was only meters above the dark, white-flecked waters of the bay. From her belly extended hoses. and Grimes knew that the thirsty centrifugal pumps would be sucking in ballast.

"*Pamir* waterborne," announced Listowel from the VHF speaker. "Am proceeding to berth. Over."

Grimes, Williams and Rowse shrugged themselves into heavy overcoats, put on fur-lined caps. The harbormaster led the way to the elevator that would take them down to ground level. They dropped rapidly to the base of the tower. Outside it was bitterly cold and the wind carried thin flurries of snow. Grimes wondered why some genius could not devise earflaps that would not inhibit hearing—his own prominent ears felt as though they were going to snap off at any moment. But during berthing operations it was essential to hear as well as to see what was going on.

The three men walked rapidly to the wharf, breasting the wind—little, fat Rowse in the lead, chunky Grimes and big, burly Williams a couple of steps in the rear. The shed lights were on now, as were the position-marker flashers. Beside each of the latter waited three linesmen,

beating their arms across their chests in an endeavor to keep warm. The berthing master, electric megaphone in his gloved hand, was striding up and down energetically.

Pamir came in slowly and carefully, almost hidden by the cloud of spray thrown up by the turbulence induced by her airscrews. She was accosting the wharf at a steep angle at first and then turned, so that she was parallel to the line of wharfage. The wind did the rest, so that it was hardly necessary for Listowel to use his line-throwers fore and aft. She fell gently alongside, with her off-shore screws swiveled to provide transverse thrust against the persistent pressure of the southerly.

She lay there, a great, gleaming torpedo shape, gently astir as the slight chop rolled her against the quietly protesting fenders. The hum of motors, the threshing of airscrews, suddenly ceased.

From an open window in his control room Listowel called, "Is this where you want me?"

"Make her fast as she is, Captain," called the berthing master.

"As she is," came the reply.

A few seconds later a side door opened and the brow extended from the wharf, stanchions coming erect and manropes tautening.

Grimes was first up the gangway. After all, as he had said to Sonya, the lightjammers were his babies.

LISTOWEL received the boarding party in his day cabin.

With him was Sandra Listowel, who was both his wife and his catering officer. Rim Runners did not, as a general rule, approve of wives traveling in their husband's ships in any capacity, but Sandra was one of the original *Flying Cloud* crew and had undergone training in that peculiar mixture of seamanship and airmanship required for the efficient handling of a lightjammer. Grimes often wondered if she had, over the years, become like so many of the wives of the old-time windjammer masters, a captain *de facto*—though he did not think that Ralph Listowel would allow such a situation to develop.

Captain Listowel had changed little over the years. When he rose to greet his visitors he towered over them. He had put on no weight and his closely cut hair was still dark, save for a touch of gray at the temples. And Sandra was as gorgeous as ever, a radiant blonde, not quite as slim as she had been but none the worse for that. Her severe, short-skirted, black uniform suited her.

Listowel produced a bottle and glasses. He said, "You might like to try this. You look as though you need warming up. It's something new. Our Llanithi friends acquired a taste for scotch and a local distiller thought he'd cash in on it. What he produced is not scotch. Even so, it's good. It might go well on Lorn and the other Rim Worlds."

Grimes sipped the clear, golden

fluid experimentally, then enthusiastically. "Not bad at all." Then: "You'd better have some more yourself to soften the blow, Listowel."

"What blow, Commodore?"

"You've a very quick turn-around this time. As you know, *Herzogen Cecile* is tied up for repairs on Llanith—and I'd still like to know just how Captain Palmer got himself dismayed."

"I have his report with me, Commodore."

"Good. I'll read it later. And when *Lord of The Isles* comes in to Port Erikson she's being withdrawn for survey. Which leaves you and *Sea Witch* to cope." He grinned. "As they used to say back on Earth in the days of sail, 'Growl you may, but go you must.'"

"But we're still in the days of sail, Commodore," said Listowel. "And as one of the sailing ship poets said, 'All I ask is a tall ship and a star to steer her by.'"

"Very touching, Ralph, very touching," commented Sandra Listowel. "But I'm sure that the Chief Stewards of the ocean-going sailing ships had their problems, just as I have." She turned to Grimes. "Last time we were in Port Erikson, Commodore, we enjoyed our usual two weeks alongside—but even then we sailed without all our stores. How will it be this time?"

"Better," promised Grimes. "I'll light a fire under the tail of the Provadore Department back at Port

Forlorn." He allowed Listowel to fill his glass. "Did you have a good trip, Captain?"

"Yes. Even so—"

"Even so what?"

"I think you might keep us informed, sir, of these other lightjammers, the experimental ones, cluttering up the route between Lorn and Llanith."

Grimes stared. "What are you talking about, Listowel?"

"We averted collision by the thickness of a coat of paint. Captain Palmer, in *Herzogen Cecile*, also had a close shave. His emergency alteration of course was so violent that it carried away his N and E masts with all their sails. He limped to Port Listowel on Llanith on S and W only."

"Why didn't he report it? The circumstances, I mean."

"He must have read your last circular, Commodore."

Grimes' prominent ears burned as he flushed angrily. But Listowel was right. He, Grimes, had written that circular under pressure from the Rim Worlds Admiralty—which body was, as he had put it, passing through a phase of acting like small boys playing at pirates. The fleet was out—or had been out or would be out—on deep space maneuvers. Masters and officers were reminded that the Carlotti bands were continually monitored by potentially hostile powers. Therefore no report of any sighting of Rim Worlds Navy warships was to be made over

these channels, whatever the circumstances. And so forth.

"We are the only people with the Erikson-Charge-Reversing Drive," went on Listowel. "So we assumed that what we saw was an experimental warship. One of ours. Palmer assumed likewise."

Grimes made a major production of filling and lighting his pipe. He said through the swirling cloud of acrid blue smoke, "The Navy doesn't have any lightjammers, yet. They want some, just in case we ever fail to see eye to eye with the Llanithi Consortium. But the first ships of the line, as they are to be called, are still on the drawing board."

Listowel murmured thoughtfully, "Nevertheless we saw something—and it as near as dammit hit us. What was it, Commodore?"

"You tell me," said Grimes. "I'm listening."

II

LISTOWEL was saying, "We were bowling along under a full press of sail and the Doppler Log was reading point eight nine seven, so it was nowhere near time to light the fire under our arse—" He coughed apologetically. "That, sir, is the expression we use for starting the reaction drive—"

"I gathered as much," said Grimes. "But go on."

"We were just finishing dinner in the main salon. I had Llawissen and

his two wives—he's the new Llanithi trade commissioner, as you know—at my table. We were making the usual small talk when I noticed that the little red warning light in the chandelier had come on."

"Sounds very fancy," commented Williams.

"You should have done more time in passenger ships, Billy," Grimes told him. "That signal is to tell the master that he's wanted in control, but for something short of a full-scale emergency. Carry on, Captain."

"So I excused myself, but didn't leave the table in a hurry. Still, I lost no time in getting to the control room. Young Wallasey, the third mate, was O.O.W. He said, 'We've got company, sir.' I said, 'Impossible.' He pointed and said, 'Look.'

So I looked.

"We had company all right. She was out on the starboard beam, just clear of E topmast. She was only a light at first, a blueish glimmer, a star where we knew damn well no star should be, could be, hanging just above the distant mistiness of the Lens.

"'Anything on the radar?' I asked.

"There wasn't—and these ships aren't fitted with Mass Proximity Indicators."

"No need for them," grunted Grimes, "unless you have Mann-chenn Drive."

"So—there was nothing on the

radar, which is what made me think afterward that this vessel must have been an experimental warship. The light was getting brighter and brighter, suggesting that the ship—I had already decided that it must be a ship—was getting closer.

"I got the big mounted binoculars trained on it. After I got them focused I could make out details, although that fuzzy, greenish light didn't help any. Some sort of force field? But no matter. I'd say that it—she—wasn't as big as *Pamir* or any of the other commercial light-jammers. She had an odd sort of rig, too. Instead of having four masts arranged in a cruciform pattern she had three, in series. And the sails—what I could see of them—had reflective surfaces on both sides instead of on one side only, as is the case with ours.

"And she was getting too bloody close on a convergent course. That was obvious, radar or no radar. Wallasey was calling her, first on the Carlotti set and then on NST, but getting no reply. There wasn't time to break out the Morse lamp. Whoever dreamed that we'd need it in deep space?

"So I said to hell with this and altered course, turning my W sails edge on to the Llanith sun. It was only just in time. That bastard was so near that I could see a line of ports with what looked like the muzzles of weapons sticking out of them. If she'd opened fire I wouldn't be here to tell the tale."

"Nor would any of us," commented Sandra Listowel.

"And only you and the officer of the watch saw this—thing?" asked Grimes.

"I'm not in the habit of throwing tea parties in my control room during emergencies, Commodore."

"Sorry. And presumably Captain Palmer saw something similar?"

"He did."

"But finish your story, Captain. What happened next?"

"Nothing. As I've told you, I altered course. And when next I was able to snatch a glance out of the ports she was gone. Like a snuffed candle, Wallasey told me."

Grimes grunted. He was thinking matters over. While he had discovered the anti-matter systems to the Galactic West he had never visited their worlds. And he had never sailed in the lightjammers—though these ships were his brain children. He could afford the time for a voyage to Llanith—although his best policy would be to make all arrangements for the conduct of affairs during his absence first and to inform Rim Runners' management afterward.

Not that this last mattered really. The Rim Worlds Navy would be interested in this story of alien lightjammers on the Lorn-Llanith trade route—and Grimes, as a Commodore of the Naval Reserve, had often in the past been called back to active duty to investigate strange occurrences. He had been called the

Confederacy's odd-job man for reasons. And Sonya would be in this too—she still held her commission in the Intelligence Branch of the Federation Survey Service.

Grimes said to Rowse, "I'd like to borrow your office, Captain. I've a pile of telephoning to do. Oh, Captain Listowel, would you mind having accommodation ready for Mrs. Grimes and myself? We shall be making the next round trip with you."

"And what about me, Skipper?" asked Williams plaintively.

"I'm sorry, Bill, but there just aren't any senior masters kicking around loose at the moment. So, as of right now, you're appointed Port Forlorn astronomical superintendent, acting, temporary."

"Not unpaid?" demanded the big man.

"Not unpaid," agreed Grimes.

Williams' manner brightened.

GRIMES called Admiral Kravitz first. The Officer Commanding Rim Worlds Navy was not pleased at being awakened from a sound sleep, but after he had listened to Grimes' story he was alert and businesslike. He glowered at Grimes from the telephone screen. "These reports. They're utterly fantastic. Can you trust these masters of yours? Couldn't they have been seeing things?"

"They saw something," said Grimes. "In the case of *Pamir*, the intruder was seen by Captain Lis-

towel and his third officer, Mr. Wallasey. In the case of *Herzogen Cecile*, the chief and second officers were in the control room as well as Captain Palmer. All the stories tally, even to minor details."

"Is there any—ah—excessive drinking aboard your ships? Any addiction to hallucinogenic drugs?"

"No." Grimes' ears were reddening. He countered with: "Are you sure that the Navy hasn't any experimental lightjammers?"

"You know bloody well we haven't, Grimes. Oh, all right, all right. Have your free trip at the taxpayers' expense. Don't forget to send the bill for your fare in to the Rim Worlds Navy."

"And my commodore's pay and allowances, sir?"

"Take that up with the accounts department, Grimes. You know how to look after yourself. Call me again at a civilized hour tomorrow morning after you've got things organized."

"Good night."

Grimes allowed himself a small grin. He was in an if-I'm-up-everybody's-up mood. He called Sonya. She, too, exhibited extreme displeasure at being disturbed at, as she put it, a Jesusless hour. But her displeasure was replaced by enthusiasm. By the time the call was concluded she had decided what she would pack for herself and for Grimes and assured him that she would be at Port Erikson within twenty-four hours.

There was another call Grimes would have liked to have made, but unluckily Ken Mayhew, one of the few remaining psionic communication officers in the Rim Worlds, was not on Lorn. He was spending a long holiday on Francisco, of which planet his wife was a native. A good PCO, Grimes often said, was worth his weight in Carlotti transceivers—but not all PCOs were good and in the vast majority of interstellar ships the temperamental telepaths had been replaced by the time-space twisting Carlotti radio equipment. But a Carlotti transceiver could not read minds, was incapable of that practice, frowned upon by the Rhine Institute but exercised nonetheless and known variously as snooping and prying. If *Pamir* had carried a psionic radio officer much could have been learned about the strange lightjammer. As it was, nothing—apart from the details of her appearance—was known.

Grimes went to the guest bedroom that had been provided for him in the Port Erikson staff accommodation block and settled down to read the reports—Listowel's as well as Palmer's. He would have liked to have discussed them with Rowse and Williams, but the port captain was organizing the round-the-clock stevedoring activities and Williams, who loved ships, was no doubt making a nuisance of himself to *Pamir's* officers.

The reports told Grimes little

more than he had already learned from Captain Listowel's spoken account.

GRIMES and Sonya were guests in *Pamir's* control room when she sailed from Port Erikson at local noon, three day's later. The southerly had persisted, had freshened and was holding the ship against the wharf. The pivoting airscrews would be hard put to it to provide sufficient transverse thrust to pull her out bodily from the berth. But the little icebreaker was also a tug and was given a forward towline by *Pamir*.

Mooring lines were let go fore and aft, were swiftly winched in-board. The pivoted offshore airscrews began to spin faster and faster, their whirling blades flickering into invisibility—but they were doing little more than holding the ship against the wind.

"Take her out, *Bustler*," ordered Listowel into his VHF microphone.

"Take her out, Captain," came the cheerful acknowledgment.

The towline grew taut, scattering a glittering spray in the thin sunlight. *Bustler's* diesels thumped noisily and black smoke shot from her squat funnel to be shredded by the stiff breeze. Grimes went to an open window on the port side of the control room, looked out and down. There was a gap now between the wharf fenders and the side of the ship forward, a gap that was slowly widening. But what was

happening aft? What about the projecting venturi of the reaction drive, the after control surfaces? Wasn't there a possibility—a probability—of their fouling the wharf gantries? But Listowel, standing in the middle of his control room, didn't seem to be worrying about it. And, after all, the ship was his.

The stern was coming off, too, under the tug of the airscrews, although not so rapidly. There was clearance between the tail fins and the nearest wharf structure—not much, but enough. And then the port propellers, unpivoted, whirled into motion, giving headway and accentuating the swinging moment. *Pamir* turned to starboard slowly but determinedly, a white and green jumble of brash ice piling up along that side. She came around into the wind and the starboard screws pivoted as she turned, giving headway instead of lateral thrust.

Astern the distance between ship and wharf was widening rapidly.

"Let go, *Bustler*," ordered Listowel and then, to Grimes: "I'm always afraid that one day I'll forget and drag that poor little bitch with me all the way to Llanith."

"Is there any market there for used tugs or icebreakers?"

"Button her up, Mr. Wallasey," said Listowel.

The third officer pressed buttons. The wheelhouse windows slid shut.

And about time, Grimes thought, icy drafts had begun to eddy about the compartment.

"Dump ballast."

The ship lifted as the tons of water gushed out from her tanks, rising faster and faster, stemming the wind, until Coldharbor Bay, directly beneath her, seemed a puddle beside which a child had set a huddle of toy buildings—until far to the south the Ice Barrier, a coldly gleaming wall of pearly white, lifted over the black sea horizon.

She lifted like a rocket, but without noise and without crushing acceleration effects. She soared into the clear sky, the color of which deepened from blue to purple, to black. Below her the planet was no longer a vast, spread-out map—it was a globe, with seas and continents half glimpsed through the swirling cloud formations, with the dark shadow of the terminator drifting slowly across it from the west.

The chief officer came into the control room to report all secured for space. Other reports came over the intercom. Listowel acknowledged them and then, smiling, turned to his guests. "Well, Commodore and Mrs. Grimes, how do you like it so far?"

"I envy you, Listowel. You've a fine ship and you know how to handle her."

"Thank you, Commodore." He said to the third officer, "Make the usual warning, Mr. Wallasey." Then, to Grimes: "Seats and seat belts, sir. I have to swing her to the right heading now."

The maneuver was routine enough in any interstellar ship, the turning of a vessel about her axes until she was lined up with the target star. Somewhere amidships the big, directional gyroscopes grumbled, hummed and then whined, and centrifugal force gave the illusion of off-center gravity. The great globe that was Lorn seemed to fall away and to one side, and its sun drifted aft. Ahead now was only the blackness of intergalactic space, although the misty Lens was swimming slowly into view through the side ports. Then, coming gradually toward the center of the cartwheel sights, appeared the distant cluster of bright sparks that were the anti-matter stars. The gyroscopes slowed almost to a stop, grumbling, as Captain Listowel made the last fine adjustments. They halted at last.

The master looked up from his sighting telescope, murmured, "She'll do." Both hands went to the console before him. He said, "Look out through the side ports and aft, Commodore. This is worth watching."

It was.

From the control room—which, like the bridge of a sea-going ship or the conning tower of a submarine, was a superstructure—there was a good view astern. Grimes could see the engine pods, four to a side, their now motionless four-bladed airscrews gleaming in the harsh sunlight. He could see the

stubs of three of the masts—W to port, N on the centerline and E to starboard. S, of course, was beneath the hull and not visible, except in the periscope screen. But those stubs were stubs no longer. They were elongating, extending, stretching like impossibly fast growing, straight-stemmed trees. And as they grew they sprouted branches, foliage—the yards and the sails. The royals at the head of each mast were fully spread before the process of telescopic elongation was completed.

There was disorientation then, visual confusion, upset balance as the star wind filled the sails. What had been up was up no longer. Aft was still aft, but it was also "down." Chairs swung in their gimbals, as did some of the instruments. Other equipment was cunningly designed so that it could be used from almost any angle.

Grimes realized what was happening but, twisting his body awkwardly in the chair, still stared in fascination aft and down through the polarized glass of the viewports. He had seen the sail plan of this ship, of course, had helped to draw it up; but this was the first time he had watched a lightjammer actually making sail. He mentally recited the names of the courses. He had insisted the old nomenclature be used. Northsail, lower topsail, upper topsail, topgallant, royal...

He turned away at last, asked,

"Do you usually make sail all in one operation, Captain?"

Listowel laughed. "Only when I have guests in the control room."

Sonya laughed, too. "John would prefer to see all hands out in space-suits, clambering in the rigging like monkeys."

"The good old days, eh?" Listowel unsnapped his seat belt. "Roll and go. Hell or Llanith in ninety days—and the sun's over the yardarm."

Grimes took one last look at that splendid suit of sails, black against the glare of the Lorn sun, before he got up to follow Listowel and Sonya from the control room. He realized that he would have to get his spacelegs back. In this inertialess ship, in spite of the already fantastic acceleration, the distinction between up and down was a matter of faith rather than of knowledge.

THEY enjoyed their drinks—more of the Llanithian whisky—in Listowel's comfortable day room, where Sandra joined them.

"How are the customers?" her husband asked her.

"There's only one this trip," she told him. She flashed a smile at the guests. "I don't count the commodore and Mrs. Grimes as real passengers."

"Who is it?" asked Grimes. "Anybody I know—or should know?"

"Perhaps you should know her, sir. She's a missionary."

"Why wasn't I warned?" demanded Listowel.

"I'm warning you now, Ralph."

"What's her name? What nut cult is she trying to peddle?"

"She's the Reverend Madam Swithin. Rather an old dear, actually. She's a missionary for the United Primitive Spiritualist Church."

"And she thinks she'll be able to convert the Llanithi?"

"She'll probably convert some of them. After all, given the right conditions you can convert anybody to anything."

"But United Primitive Spiritualism—" muttered Listowel disgustedly.

"They have something," Sonya told him. "I've had some odd experiences and so has John."

"I only hope she's not at my table," said the master.

"Where else could I put her, Ralph? After all, she is a person of some importance in her church. I couldn't put her with the junior officers."

"I'm sorry about this, Commodore," Listowel said.

"Don't worry, Captain. We'll survive somehow," Grimes told him.

THE Reverend Madam Swithin was, as Sandra had said, rather an old dear, but the sort of old dear whose idea of conversation is

asking endless questions. Yet it could be said in her favor that she enjoyed the excellent food prepared by Sandra and served by the efficient stewardess and that she did not belong to one of those sects that regard alcoholic beverages as sinful. It took her some little time to get things sorted out, however. She knew that a commodore is superior to a captain and so assumed that Grimes was master of *Pamir*. She asked him why he wasn't wearing uniform. Then she asked why *Pamir* wasn't named according to the general Rim Runners principle, with the "Rim" prefix.

Grimes told her, "In these vessels we've tried to revive the names of the old sailing ships, the Terran windjammers. Unluckily most, if not all, of the most famous names are being used by Trans-Galactic Clippers—*Thermopylae* and *Cutty Sark* and so on."

"Are Trans-Galactic Clippers lightjammers like this one, Commodore?"

"No, Madam Swithin. But the original clippers were very fast sailing ships and long after sail had vanished from the seas the name 'clipper' was still being used by the operators of other forms of transport—road services, airlines and so forth. One of the first little ships to fly to Earth's moon was called *Yankee Clipper*."

"How interesting, Commodore. The usage gives one a sense of continuity, don't you think? And now,

Captain, when do you think you're getting this clipper of yours to Llanith?"

"ETA is just three weeks subjective from now."

"You said 'Hell or Llanith in ninety days'," Sonya reminded him.

"Ninety days objective," He told her. "But only three weeks as we shall live them, Mrs. Grimes."

"And is there really any danger of the ship's getting wrecked? Not that I'm frightened, of course. I know that there is no death."

Sandra joined them at the table, bringing coffee. "Don't worry, Madam Swithin. That 'Hell or Llanith' is just an expression that Captain Listowel picked up from a book about the famous windjammers. There was a captain on the trade between England and Australia who used to say, 'Hell or Melbourne in ninety days!'"

"And as I was saying, dear, such a sense of continuity. So fascinating to think that you sailing ship captains are reincarnations of the old sailing ship captains. The wheel has come full circle and you have been reborn—"

Listowel was beginning to squirm uncomfortably in his chair. The junior officers at their tables—obviously listening—were starting to look amused. Grimes endeavoured to steer the conversation on to a fresh tack.

"And when, Captain," he asked, "do you start the reaction drive?"

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"A week from now, Commodore, as soon as we have point nine recurring on the Doppler Log. Then we have a week of full acceleration and FTL flight. Then we have to decelerate. And then, all being well, we're there."

All being well, thought Grimes. But if all is well, I shall have made this trip for nothing.

III

SHE was a fine ship, this *Pamir*, and most efficiently run—but, to one accustomed to a conventional starship, uncannily quiet. Grimes missed the incessant, noisy, arhythmic hammering of the inertial drive, the continuous thin,

high keening of the Mannschenn Drive. Here the only mechanical noises were the occasional sobbing of a pump, the soft susurrus of the forced ventilation.

On she drove, running free before the photon gale. The Rim Stars astern were ruddily dim—the suns of the Llanithi Consortium blazed intensely blue ahead. And on the beam, mast and sails in black silhouette against it, glowed the great Lens of the Galaxy, unaffected by either red or blue shift.

The needle of the Doppler Log, after its initial rapid jump, crept slowly around its dial. *Point eight, point eight five, point eight seven five.* . . . Grimes tried to imagine what the ship must look like to an outside observer, tried to visualize the compression along the fore and aft line. But to see her at all that mythical outside observer would have to be in another ship traveling in the same direction at the same speed—and then, of course, he would observe nothing abnormal.

And what would happen if *Pamir* hit something—even only a small piece of cosmic debris—at this fantastic velocity? So far the lightjammers had been lucky—but what if their luck suddenly ran out? The question, as far as her crew was concerned, was purely academic. They would never know what hit them—although after weeks or months or years the brief flare would be visible in the night skies of Lorn and Llanith.

At last came the time for the final acceleration—and the reversal of atomic charges. Again Grimes and Sonya were guests in the control room, watching with fascination. Listowel explained, "This isn't half as bad as that moment when the temporal precession field of the Mannschenn Drive is initiated. Oh, you'll feel something. We all do. Just a microsecond of tension and, at the same time—as the charges are reversed—what we call a scrambled spectrum. But there's none of the dithering about in and on alternate time tracks that we experienced when we first discovered the effect."

"Just as well," grunted Grimes. "Alternate time tracks are among my pet allergies."

Listowel was watching the log screen, which gave him far finer readings than the dial, to six places of decimals. Grimes and Sonya watched, too.

999993. . . The crimson numerals glowed brightly. 999994. . . 999995. . . The 6 was a long time coming up. . . Ah, here it was. 999997. . . 999998. . . There was another long delay. Then the final 9 appeared briefly but flickered back to 8.

"Go, you bitch, go," Listowel was whispering.

999999. . .

"It's holding, sir," whispered one of the officers.

"I have to be sure. . . Now!"

After the long days of quiet sailing the screaming roar of the

rocket drive, carried by and through the metal structure of the ship, was startlingly loud. There should have been brutal acceleration, but there was not. There was not physical sense of acceleration. Yet Grimes felt as though he, personally, were striving to lift some impossibly heavy weight. He felt as though he were pressing against some thin yet enormously tough film that stubbornly refused to break.

Then it burst.

There was real acceleration now, driving him down into the padding of his chair. He was dimly aware that Listowel—a strange Listowel, who looked like a photographic negative, whose shorts-and-shirt uniform was black instead of the regulation white, whose face had become oddly negroid—was doing things, explaining as his hands moved over the console. His voice, normally light, was a deep, grumbling bass. "Have to pivot the sails, Commodore. Edge on, or we'll be taken aback—"

Suddenly things snapped back to normal.

Color and sound were as they should be and the acceleration had eased to a fairly comfortable one gravity. Grimes took mental stock of himself. Yes, he was still Commodore John Grimes of the Rim Worlds Naval Reserve, astronomical superintendent of Rim Runners. And he was still aboard *Pamir*. He turned to look at his

wife, who smiled back at him rather shakily. And Sonya was still Sonya.

So far so good.

And the log screen?

Blue numerals now—1.000459. . . 1.000460. . . The final 1 flashed up and then, in steady succession: 2, 3, 4, 5. . .

All my years in deep space, thought Grimes, and this is the first time I've really traveled faster than light. . .

"SO WE are all anti-matter now, Captain?" asked the Reverend Madam Swithin that evening at dinner. She did not wait for a reply, but went on, "But what about our souls, our essential essences?"

"I'm afraid, madam, that that's rather outside my province," replied Listowel.

"And what do you think, Commodore?"

Grimes grunted through a mouthful of steak.

"But the Llanithi have souls," the missionary went on. "Otherwise I should not be traveling to their worlds."

A rather uncomfortable silence was broken by Sonya. "Tell me, Madam Swithin—do you ever, in your seances, establish communication with the departed spirits of non-human entities?"

"Frequently, Mrs. Grimes. One of our mediums has as her control a Shaara princess, who last enjoyed material existence five hundred

standard years ago. And recently, during a service in our church in Port Farewell, a spirit spoke through the officiating medium and said he was—that he had been, rather—a people's marshal on Llanith. What is a people's marshal, Captain?"

"It's roughly equivalent to a police commissioner on our worlds, madam," replied Listowel.

Sonya sipped from her wine glass, then asked, "One thing has always rather puzzled me, Madam Swithin. One of the doctrines of your church is reincarnation. How does that fit in with that large number of disembodied spirits who are always present at your seances to say their pieces?"

The motherly little woman smiled sweetly at Sonya. "There is reincarnation, as we believe—as we *know*—Mrs. Grimes. But the soul is not reincarnated into a new body immediately after its release from the old one. In the case of ordinary people the delay is not a long one. It is the extraordinary people, the outstanding personalities, who often have to wait for centuries, or until a suitable vehicle for their rare psyches has become available—"

"In other words," said Grimes, who was becoming interested, "until the genes and chromosomes have been suitably shuffled and dealt."

"What a good way of putting it, Commodore. I must remember that." She looked at Grimes as

though she were viewing him as a potential and valuable convert—which, Grimes realized, he could be. *Why can't I keep my big mouth shut?* he asked himself. "You will agree, Commodore, that a special sort of character is required for the captain of a ship?"

Grimes made a noncommittal sound.

"And that an even more special kind of character is required for the captain of a sailing ship—"

"I did," admitted Grimes cautiously, "bear certain qualities in mind when I appointed the masters and officers to these lightjammers—and not all of those I selected passed the rather rigorous training."

Listowel muttered something about bumbling around in blimps over the Great Barrens, but subsided when Grimes glared at him.

"And how many lightjammers does your company operate, Commodore?"

"At the moment, four. *Pamir*, *Herzogen Cecile*, *Lord of the Isles* and *Sea Witch*. As the trade expands we shall require more tonnage, of course. *Preussen* and *Garthpool* are on the drawing boards. And the Rim Worlds Navy has the plans for at least three sailing warships."

"Four ships. And five more some time in the future. But what of the thousands of sailing captains who must have lived in the days when

their vessels were the only long-distance transport on Earth? Many of those souls must still be waiting for reincarnation."

"One of my ancestors might be among them," said Grimes.

"Really, Commodore?"

"Yes. He was a Barbary Corsair—but before that he was master of an English ship in the Mediterranean trade. A forced convert to Islam who decided to play along and do as well for himself as possible—"

"Are you sure that he was never reincarnated, John?" asked Sonya. "Some of the less savory episodes in your past haven't been far short of piracy."

"I might be able to find out for you, Commodore," said Madam Swithin eagerly. "I am more of an administrator than a medium, but I do have powers—"

"Thank you," Grimes told her. "But I think I'd rather not know."

PAMIR drove on, no longer scudding before the photon gale but riding the thunder of her rocket drive. Ahead was an impossible star cluster—the suns of the Llanithi Consortium blue-blazing, the Rim Suns sullenly smoldering embers. Astern was—nothing. On she drove, outrunning light, until the time came for deceleration.

The reaction drive was shut down and, at his controls, Listowel carefully pivoted his sails. Northsail, eastsail, southsail and westsail he

turned, trimming them so that the radiance from the Llanithi stars was striking their reflecting surfaces at an oblique angle. Grimes, watching the Doppler Log screen, saw the numerals change from 25.111111 to 25.111110, to 25.111109...

All four lower courses were now exerting full braking effect and the lower topsails were trimmed, squared. 23.768212... 23.768000... 23.759133... Upper topsails next. 19.373811... Topgallantsails... The log was winding down rapidly and ahead one of those vividly blue stars was a star no longer, was beginning to show an appreciable disk. Now the royals. 12.343433... 11.300001... 10.452552... 8.325252... 5.000000... 2.688963...

So far there was no sensation. The ship was inertialess, her structure and crew protected from the forces that should have exploded them through the darkness and emptiness in a blazing flare of energy.

1.492981... 1.205288... 1.200438... 1.113764... 1.000009...

The countdown was slowing. 1.000008... 7... 6... 5... 4... 3... 2... 3... 2... 1... 2... 1... 1.000000...

As when the light barrier had been broken, there was the feeling of unbearable tension. Something snapped suddenly. The stars ahead diminished in number, although

(Please turn to page 173)

MAYFLOWER I

ERNEST TAVES

The moon had been
conquered. But humanity
was still a problem!



The logistic demands of the colonization process almost always dictate a biased sex ratio in the colonizing population. In the Mormon hegira from Missouri to the valley of the Great Salt Lake in 1847, for example, Brigham Young led a band of 143 men and three women. And two children. Other similar disbalances could be cited. The mission of colonists is first to survive, then to reproduce. In the history of colonization the men go first and the women come later, but the planners of the first step toward extraterrestrial colonization recognized man's need to introduce human biological components into his new pattern of survival.

Boris Spector,
The Tactics of Colonization
Harper and Ivanovich, 2025

PICK this up as *Pearl Harbor* is preparing to leave *Hiroshima*. These are, perhaps, extraordinary names for components of a lunar mission and the responsibility for this nomenclature is lost in a Byzantine maze of international bureaucracy. There is a symbolism, no doubt, but no one is willing or able to say what it is. Be that as it may, *Pearl Harbor* is about to separate and enter landing orbit. After that *Hiroshima* will go back home.

Nagasaki, her sister ship, will be along later.

"Chris?" Leon Sokolov in *Hiroshima*.

"Roger, Lenny. All lights green here."

"Roger. Let's keep it that way. You're on automatic sequence in—fifty-eight seconds."

"Right."

"I thought it might be well to give you a word of advice." His voice spoke the words with a heavy but entirely understandable accent. When the explorers of space had made their first tentative steps toward international cooperation there had been a bit of talk about which language to use. English had won.

"Advise ahead, old buddy."

"Just one word—no, this will take more. We're leaving you down there with three girls. And one of them is ours." Chris Conway looked about and saw that this was so. Marya Popovich was on his right and across from them, facing them, were the now mildly amused persons of Teiko Satori and Julia Clark. They were belted in. Chris would fly *Pearl Harbor* down but, if necessary, any of the girls could do it as well.

"That's right, Lenny. But it's too late to trade places. Sorry."

"Too late to trade places, right. So I say, Comrade Christopher Conway—not too much time left now—conduct yourself with honor

and probity, as would I, had I drawn the lot instead of you. I am not, what you say, jealous." Of course not, thought Chris, looking at the girls. "So—well, good luck, that's all. Automatic sequence in ten seconds. Good trip, comrades."

Four voices mixed together in Sokolov's phones. Then automatic sequence took over and they were detached and away to the flat surface of Mare Nectaris, near the terminator, to establish the first tentative, temporary colony on the moon. They were programed for a twenty-eight-day stay.

THE landing was smooth. "I couldn't have done better myself," Julia said.

These four had been relentlessly screened through a psychological/psychiatric/emotional sieve that didn't pass much. The scores of Chris and Sokolov had been so close that they had settled that one by yarrow stalks. The three girls were in a class by themselves, selected on the basis of parameters too numerous to mention.

"I appreciate the compliment, Julia. Houston?"

"Roger, Chris."

"To coin a phrase, *Pearl Harbor* has landed."

"Girls all right?"

A trilingual babble answered in the affirmative.

There had been too many jokes about this, of course, about what the first man to be cast upon the

moon with three lovely girls would make of it. The design of the mission had not called for the girls to be lovely, of course—they had been chosen on other bases. But these three had come up lovely.

What the four of them were supposed to make of it was to live on the moon for four weeks and see how it went. What, if anything, went wrong. There had been many simulations on Earth—in air-raided shelters, abandoned mines and on the bottoms of the seas. And problems, as they say, had arisen. These had been worked on (though not solved) and the time had come to try the real thing.

Why three women and one man? The President of the United States was a woman, but that was not the reason. It was more that IASA (International Aeronautics and Space Administration) had become convinced of the intrinsic biological superiority of the female—a conclusion based partly upon the history of man and partly upon the results of the Earth simulations.

Their qualifications for this mission? They're bright, but not too bright (average IQ, 146). They are emotionally stable, but not too stable. They have all seen each others' profiles and one consequence of this is that Chris hopes to God that the three of them never get mad at him, for whatever cause, at the same time. And they are trained primarily in the behavioral sciences. Marya is a psychologist,

Teiko is a sociologist and Julia is a psychiatrist. In addition all are sketchily familiar with astronomy, geology, nursing, anesthesia and photography. Surprisingly, they get on well together.

Within the bodies of this crew are no vermiform appendices—these have been prophylactically excised. The dentists have done all they can to ensure that no acute problems arise in that area—no tooth is going up there that might need to be extracted in a hurry. None of the colonists has any dental training whatever. The girls' pregnancy tests are negative.

Back to psychology and the solitary male. He is also bright, but no genius. He is stable, but he is alive. And he is trained—he is a doctor of medicine.

In short, a different kind of mission. No geologists, no seismologists, no archeologists. Just people. Except for Chris, behavioral people. They will study themselves, the first colony on the moon. The physical scientists have given them things to do and things to do with, but that isn't the main idea.

Oh, yes—the Commanding Officer is Christopher Conway. This is not because he's the only male—he drew the long yarrow stalk.

AFTER a thorough on-board checkout they suited up, cracked the hatch and lowered the ladder. Quite a few people had landed on the moon by now, but

none of these four had. Though they had watched the action from Earth before, they found it was, in the event, some different kind of trip. And another lunar first—three women on the surface at the same time exceeded the previous record by two.

They opened the hatch of the cargo compartment.

"First things first," said Chris. "It's going to be a long night."

The amount of energy they could take to the moon was stringently limited and the first instruments to be deployed were solar accumulators. The landing site was near the terminator, where the lunar day had just begun, so they could store maximum solar energy before nightfall. It would, indeed, be a long night. And a cold one. The accumulators were, logically, just inside the hatch.

"Okay, boss," said Teiko. "Where you say we put these?"

Chris's intent was that his CO title be nominal. But someone had to take responsibility for decisions and on this mission he was it. He surveyed the immediate area.

"About here, I'd say. We'll put the dome over there—the surface is nice and smooth."

"About here, I'd say. We'll put the dome over there—the surface is nice and smooth."

The accumulators were bulky and on Earth would have been a problem, but in the lunar gravity they made easy work.

Next, the dome. This was of transparent mylarplex, a few mils thick. Transparent mylarplex. The colonists had been given their choice of anything from transparent through opaque. They had unanimously wanted transparent, thinking about lying there in the lunar dark, looking up at the stars.

The dome folded into a small package, but when expanded (with an oxygen-nitrogen mixture) it was supposed to be big enough to house four people and everything they would need for four weeks.

They carried the folded structure to the smooth place Chris had indicated and unfolded it. Chris carried over the first of a number of metal cylinders of the compressed gas mixture and attached it to the fitting.

"God bless our home," he said, cracking the valve. "Best you don't leak." They were prepared to patch it if it did. The dome filled well. It was flat on the bottom, almost hemispherical on top, above three-foot side walls. The ceiling was ten feet above the floor at the apex. The diameter of the floor was twelve feet.

There was an air lock, hermetically zippered. They entered the expanded dome one at a time. They looked around.

"It's—cozy," Julia said.

"Nectaris Base—calling from *Hiroshima*."

"Roger, Lenny. It's cozy down here. Sorry you couldn't come."

"Yes. So am I. Let us hope it will be cozy. I am, as you know, about to return to Earth."

"Good trip, *Tovarisch*," Marya said.

"Yes, *Tovarisch*. So long. *Sayonara*."

"*Sayonara*," said Teiko. Her voice, soft and feminine, stood in some contrast to the others. Not that there was anything masculine about Marya or Julia. But there was something in Teiko's voice.

"See you back home," Chris said.

"*Da*. I'm just about over you now." The four looked up through the transparent dome, knowing they would not be able to see *Hiroshima*, but looking anyway. "I see where you are," Sokolov said, "but I can't see you. Goodbye, now. Over and out. *Dasvidanya*."

"So long, Lenny. *Dasvidanya*. See you in about five weeks. We've work to do now. Nectaris Base out."

THEY stood a few moments, looking at each other. The first people (except for Nora Ivanovna and Stuart Stong) to be left on the moon with no command module in orbit waiting to be flown up to. A sobering thought. They were prepared for it, but it was sobering none the less.

"Come on," Chris said. "We have work to do."

Chris, Julia and Marya went through the lock one at a time and

began the demanding job of ferrying survival gear, stores, staples and instruments through to Teiko. Unzip zipper, put gear in, zip up, unzip inside, remove gear, zip up. Carbon dioxide absorbers, IASA things to eat and drink, a chemical toilet (another lunar first, by God!), sleeping bags, books, a chess set (Chris had insisted on that) and other goodies to keep four people alive and well on alien turf for four weeks.

They put everything on the check list into the dome. The remaining gear—instruments to deploy and so on—they would take care of later.

Privacy. Something to be considered—or not considered—on such a mission. It was possible to provide the dome with opaque partitions. Thin and totally unsoundproof, but opaque. The decision here had not been given out of hand to the colonists—Mission Design wanted to have something to say about it—but the views of the colonists had been solicited. Teiko, Julia and Chris had thought that the concept of privacy didn't have much relevance. What, after all, would there be to be private about on the moon after the time together in a cramped module getting there? After the weeks of simulation on Earth, where they had already tried it both ways? Marya's view was that translucent partitions would be nice, but in the end Nectaris Base wound up with zero privacy, including the chemical toilet.

Consensus had been that privacy there would have been dishonest and fraudulent, some kind of cheap cop-out three of them didn't want. Let it be said that Marya, though not altogether of this opinion, went gracefully along with the majority.

The sunlit night of the first day came soon enough. Four space suits hung upon a complex rack standing in the center of the floor of the dome. Temperature-control units were working fine. Time to sleep—and the need for it—but everything was as bright as when they had awakened—not that they had awakened in that place.

Temperature control was on HEAT. The sun was up, but not yet high. The outside temperature was just about freezing. As the sun rose it would get up to about 170° F. They were on Mare Nectaris, so the sun would never be directly overhead, where it would send the temperature to over 260°. On Nectaris Base, as the sun rose the outside temperature would at some point, though not for long, stand at a moderate seventy degrees.

Tired—and into the sleeping bags.

"It *is* cozy," Julia said. All mikes were off. Barring emergencies there would be only brief contact with Houston, once a day. "Not at all like the simulations. It reminds me of being at camp as a kid."

"Some camp," Chris said.

"I think it looks—stark," said Marya.

"Yes." Teiko. "But beautiful, Masha, no?"

"Yes. Beautiful."

They had begun with their sleeping bags more or less at the four corners of the lunar compass. They shifted, because of the light, to put their heads all in a row in the shadow cast by the central rack.

"Masha?" Chris asked.

"Da?"

"How about a game of chess tomorrow?"

"Da. My pleasure. I beat you."

End of lunar day number one. No snoring—they had been screened for that too.

11

THEY awoke at about the same time, tossing and turning in the light gravity, then realizing where they were.

"It's funny," Teiko said. "The sun is where it was when we went to sleep. Almost. And Earth too."

"Some kind of place to wake up," Julia said.

Chris examined her through a sleepy eye. "Let's see now. Though woman's place is no longer necessarily in the kitchen, I think I'll have a large orange juice, two toasted English muffins and marmalade, two scrambled eggs and four large cups of your very best mocha java, rich and aromatic, steaming as it is brought to table by comely girl, teeth asparkle, eyes

agileam, eager to serve, to please, to make happy."

"Dream on, Massah. Masha, remind us both to make a note of this when we get up. One day into the mission—and incipient delusions of grandeur."

Chris grinned, stretched, squirmed out of the bag and used the toilet. Colonists would do what they could in their colony to retain memories of home. Thus these attitudes: Chris wore a T-shirt; Teiko wore nothing; Marya wore yellow pajamas; Julia wore a blue flannel nightgown. Julia was from New Hampshire.

And the Lunar Hilton began to stir.

Scrambled eggs? Well, no, but the rations weren't that bad, not really, not yet. So, as they would have on Earth, they had breakfast and addressed themselves to the problems of the day.

This was the first space mission to be reasonably unstructured. This fluidity was dictated by its unique goals. Work was provided, but it could be done in the colonist's time, not Houston's. The physical scientists had provided instruments and instructions about what to do with them. The concept of work was (this should be obvious) essential. These pioneers wouldn't have to fell trees or clear the jungle, but others would, later, on other planets in other systems. IASA was looking ahead. So they had work to do—it was all written in a big

book—and they were supposed to get it done, but it was up to them to structure their own time.

They finished breakfast. They had, in the dome, four folding chairs and two folding tables. They had no toasted English muffins. Chris glanced at the book that said what they were supposed to do, but he didn't open it. They didn't have to do any of it today.

"All right," he said. "I am the commanding officer of this, our Nectaris Base colony on the moon. I decree, therefore, that our first day be spent in R&R." Chris looked with some seriousness at the girls. "You behaviorists will no doubt be watching what we all do. Fine. We'll all do what we want to. I'll be taking a walk outside, picking up a few rocks. We won't deploy any instruments today, at least I won't. We'll call Houston in a couple of hours and give them our opinion of their breakfast."

"No *kushikatsu*," Teiko said.

"For breakfast?" She shrugged her slender shoulders.

"No vodka." And Marya shrugged her sturdier shoulders.

"No scrambled eggs."

"All right. So. Suit up. Walk around a bit outside, write postcards, take pictures. IASA wants all we can take, of course. Read, brood. Whatever. Each to his own. Her own. And as for you, Masha, pawn to King Four."

"So. Who says you have the first move, *Tovarisch*?" Her glance was

an enigma. "We draw for this, right?"

The beginning of their second day on the moon.

By evening of that first day we had decided to arrange the sleeping bags in a rotation. Not, as Masha pointed out, that we had any vision of taking turns being on Chris's right hand. We had come very simply and without really saying it to the thought that in some way we were all sharing each other. I understood this first when Teiko asked Marya if she could wear the bottom of those yellow pajamas.

"What is this English word, pajamas?" she asked. "If I wear these bottoms or this bottom am I wearing a pajama?"

"It's not an English word at all," Marya said. "It's Hindu and Persian. It means, leg garment. So if you wear the bottom you're wearing a pajama and if you wear only the top you're wearing something else. Not that I'd make a point of it."

Chris was quiet here, I noted. I asked him if he would like to trade with me. Had he ever worn a blue flannel nightgown?

"Once," he said. "A heavy scene. I was passing, or trying to, as a roommate when Mama

dropped in. By chance, as it were."

So Chris traded with me.

"You're better in the T-shirt," Teiko said to Chris.

"So is she," he said.

We all kicked it around a bit after that. In the end I said, "And we all know that the studs were screened out." I stood up and scratched my bottom. I said this: "The big breast award is mine. And the roundest, shapeliest bottom is Teiko's. The best legs are Marya's. And there are only two balls and Our Leader has both of them."

That's how it was then—part of how it was—to be the first colonists on the moon.

THE fourth day. Deploying instruments for the physical scientists and getting the telemetry going. Collecting the inevitable rocks, photographing everything. Getting to know you, getting to know all about you. Using the toilet, suiting up and going out onto the lunar surface. Sleeping beneath a sunlit sky. Lining up heads in the shadow of the central post, where hung the four life-supporting space suits. Sleeping on top of the sleeping bags now, the environment getting warmer, and rotating the positions from one sleeping period to the next.

The fourth night Chris was next to the center post, Teiko next and

Julia and Marya beyond. It had not escaped Chris's notice that the girls' notebooks had been filling. With what was not within his province to ask. He was the CO and the doc and the only male.

Chris thinking: *I am a quarter of a million miles from what I call home, which home I can see if I move my head a little, but just now I don't want to. I share a strange place with three great girls and there are no ground rules.*

There were no ground rules.

Chris saw that Teiko was awake. He reached over and took her hand. They turned toward each other silently. Teiko accepted the hand of Chris and also the look in his eye. Too many jokes had been written about this on Earth, but here it was. Chris had not held Teiko's hand before.

"We're all single or divorced," he said.

"Yes, boss."

"Cut that out."

"Yes, boss."

Do you remember the touch of your first girl's hand in yours? The smell of hay in the loft of a barn in August? The first time you thought you knew where it was at? You didn't, but you thought you did. Do you remember first times, first shattering events? Making out for the first time, being put down for the first time?

Nectaris Base was a first time.

"Why is that?" Chris asked.

"What?"

"That we're all married and blew it—or are single? Single or divorced. Why is that? You have a very nice hand."

They held hands like kids. Chris disengaged that hand, and put both of his upon Teiko's cheeks. And he kissed her. And that was a first time.

"You are the first to hear Conway's Law," he said after some moments.

"Yes?"

"Earth simulations don't simulate."

Silence for a time before Teiko said, "I think I know what you mean." Chris made to move on over. Julia and Marya seemed to be asleep. "No," said Teiko. This was the first putdown on the moon. "I can't say why," she said. "I don't know." They walked around the dome a bit, still holding hands, before they got back on top of their bags.

I was toward the outside of the dome, not asleep, and wondered whether to say anything. But we are a talkative people.

"Teiko? Chris?" I whispered.

"I'm not asleep either," Julia said.

"I'm sorry we've kept you awake," Chris and Teiko said more or less together.

"That's all right," I said.

"Maybe we should have had—more privacy?"

"No."

"It's better this way."

"Yes."

"Yes."

And it was evening and it was morning.

THE seventh day and the sun as high as it was going to go.

"Have you noticed," asked Chris, "that this stuff tastes more like Cornish hen than the eggs Benedict it's supposed to be?"

"No. I think it is meant to be fish cakes. In New Hampshire we always had fish cakes on Sunday morning." Julia ate as if she expected to find a bone.

"Is it really Sunday?" Teiko asked. "I thought the Christian habits of the day of rest were not so much practiced now."

"Well, not the church bit, but stomachs forget more slowly than other parts."

"What I would like to say for the record, Commander, is that they should have sent us food that was either fish cakes or black bread or *sukiyaki*—identifiable. I'm sure this brown stuff is very international indeed, but it's lost all its identity in the effort to please all of us. Perhaps I am not as ecumenical as IASA. Perhaps we might note that we don't agree that making everything pleasing to everybody can—or should—be achieved. Either in food or in work assignments."

Marya looked at her vitamin-enriched and nameless juice. Chris longed for that cup of coffee. He

hummed a nameless hymn.

"Which gods shall we worship?" Marya asked.

"Perhaps the gods should worship us," Julia said. "If not worship, then observe, enjoy. I hope we give them a good trip. I have a feeling, you know, that they like us."

GETTING to know you and coming on toward the beginning of the lunar night. The readouts show that the solar accumulators are doing their job and it begins to get cold. Houston listens every day and *Nagasaki* will be all set to go when the time comes (the colonists are glad to hear this). In the meantime they are on their own, up there by themselves, together and alone. A real trip, far out. And the sun begins to approach the lunar horizon and the ambiance within the dome changes.

"Just a reminder," Chris said, fingering his rook's pawn. "When it's night we won't be going outside."

Teiko nodded. Marya and Julia were out looking at instruments. Chris was teaching Teiko chess.

"They sent us up here without love," Chris said, looking for a move not too catastrophic for Teiko. He moved the pawn forward one square.

"Yes. They could have sent married couples. Or lovers. They

sent us without love, yes. I hadn't thought of it. Why did they do that?"

"You're the sociologist. You'll find out and tell us. Isn't a population of four a small one for your kind of thing?"

"It is. Yes." Teiko moved a knight out, not to the best square, but still developing the piece. "You weren't angry with me before—Chris?"

"When?"

"When you wanted to come to my bag and I said no. And we were tired and held hands and walked around the dome."

"No, I wasn't angry. Put down, yes, but not to where it really pricked my bubble. I was ready to crawl in, as you may have noticed."

Teiko smiled. "Yes. Anyway, I'm glad you weren't—aren't—angry."

Chris advanced a bishop and Teiko studied the board for some time. The sun was low over the horizon. "It doesn't look good, does it? My game. Masha is better for you at this. Of course if we'd brought a *go* board —"

First Marya, then Julia entered the dome. Teiko threw up her hands and resigned. Marya and Julia unsuited.

"It's going to get dark soon, boss. When do we bring in the accumulators?"

"First thing when we get up tomorrow. They're still picking

up a little sun. We'll want all we can get."

"I suppose they'll work all right," Marya said.

"We won't last long otherwise."

IT WAS day and it was night—the first they had known for almost two weeks. The limb of the sun flickered on the horizon and died. Earthshine was there, but after those days under the sun the night was dark indeed. They all felt as if they had been pitched, with ceremony, into an unfamiliar cave. Black as Egypt's night.

"I have been one acquainted with the night," said Julia. "But not like this one. But then who, before our intrepid foursome, has been acquainted with a two-week day on the moon? It makes for a contrast."

"Press close bare-bosom'd night—press close magnetic nourishing night!" Marya said this.

"I'll buy that," Chris said. "And you sure as hell know more English than we do Russian. Who said that?"

"Of course you'll buy it. A poet of yours said it. Walt Whitman."

"Far out." He glanced at Teiko. They were standing, the four of them, looking toward the place behind which the sun had fled. "Bare-bosomed night. Yes."

"Yes, Commander?" Teiko said. How to be provocative, she knew. She was a Japanese female. "And the night shall be filled with—music?"

They were hoking it up, of course, to tone down the sense of awe they all felt.

"Is a significant moment, this," Marya said. "Therefore we do some tests."

Chris groaned. The others sighed. "I know you're our resident psychologist and psychologists are doing nothing when they're not testing. But not now. It's the wrong time."

"Is the right time. Anyway, let's try the lights and see if they work." They did. She provided her subjects with test forms.

"As CO I can override this, you know?"

"Da. But you won't." And he didn't.

III

OF THE three persons you are with at this moment—to whom do you feel most antagonistic and why? I won't have any trouble with that one, Chris thought, and punched the card. *Toward whom do you feel the most positive affect?* Jargonese, but I can answer that one too. *Here are four amorphously unstructured forms. Which pleases you most and why? Which do you dislike most and why?*

There was quite a bit of that. Halfway through Chris realized he was jabbing at the papers with force and that the girls were taking note. He gritted his teeth, then

grinned inanely and did what he could to cool it. *I'm out-numbered*, he thought.

"Now," he said, the forms completed, "I will reassert my command of this, our first lunar colony." The lights were soft and the temperature was comfortable. It is cozy, Chris thought, finally understanding something of what Julia had been speaking of before. "Mission Design, in its infinite wisdom, has seen fit to provide us with a measurable amount of amenity. Niggardly but measurable. Significantly differing from zero. Fittingly, as it becomes dark, the time for our evening meal approaches. Therefore we will precede dinner this evening with a vodka martini or two and with dinner we shall have—let's see, what goes with brown hash—the *Clos Vougeot* twenty-nineteen. Any objections?"

They applauded. Chris, sensing that he had made proper use of command, relaxed after the tensions of Marya's testing.

"I have to do my job," Marya said to Chris.

"Of course, Masha," Chris said.

And they all sat together and had a martini or two. They called Houston to tell Mission Control they were having a small party and were sorry it couldn't come. Then they broke contact. Mission Design was right, of course, in providing a touch of amenity in the

night. Houston knew that as soon as any human colony was put down on an Earth-type planet it would find things to ferment in no time.

"I wouldn't have thought," Julia said later, "that brown hash could be a festive dish. But it was."

"It wasn't the hash, it was the vodka," Marya said.

"Actually, as CO, I would have to say it was the noble Burgundy."

"Anyway, a party." Teiko lay on her stomach on top of her sleeping bag, chin propped on her hands, considering the lunar night.

Marya spoke: "*Tovarisch* Christopher Conway?"

"Da?"

"We play a game of chess?"

"Why not?" he asked.

Chris drew white and played Bird's opening. Marya responded strongly and Chris transposed into a variation of the Sicilian. Finding no advantage in this, on the eighteenth move he made an unsound pawn sacrifice. Marya jumped on it and Chris lost the game. He toppled his king and rose.

"We can't do this often, God knows, but we do have an allowance of brandy. I propose that we broach that bottle right now, an ounce and a half to each, as a suitable nightcap. Majority vote wins. How say you all?"

They all said yes and had a nightcap. They changed their sleeping raiments again and went to bed. The garments were sufficiently loose to be interchange-

able. Who wore what they no longer recorded. They found it amusing to change around—it was something to do. And the rotation of sleeping gear or the lack of it spoke a symbolic language. They prepared to sleep for the first time in the dark. The drone of the life-support system made a pleasant backdrop, was more a condition of existence than an annoyance. The crescent of Earth was there for them to look at. They did not have to put their heads in the shadow of the central pillar now, so they arranged themselves differently. Marya and Julia placed their bags parallel to the circumference of the floor, Marya to the north, Julia to the east. Teiko and Chris were together to the south, heads at the outer wall, feet toward the center. That all four heads were at the outer wall was not surprising—they were looking at the lunar night for the first time. Not just the first time for them, the first for anybody.

"Masha?" Chris called.

"Yes? *Da?*"

"No hard feelings about the chess game. I won't play the Birds against you again. I'm just thinking. You're our psychologist. And a beautiful one. Your main bag is to test us, is that right?"

"This is a simplistic view, Chris, but if you have to say it that way—well, yes."

"Right. I'm just thinking out loud. Julia?"

"Yes, Commander?"

"Cut the crap, slave. In twenty-five words or less, just what is your mission here? Between the four of us, Psychiatrists have to do with emotional illness, its causes and cures, right?"

"Right."

"So. We're not emotionally ill, none of us. We were screened for that. So why are you, sweet girl that you are, here?"

"Flattery will get you nowhere, boss. We're not emotionally ill. Not now, Chris."

"We might crack up under the stress of this, our mission?"

"More or less, that's right."

"Suppose you're the one who cracks up?"

"It's not meant to go that way, boss. But if I do we've a psychologist, a sociologist and an M.D. to take care of me. You ought to be able to handle it."

"We're both M.D.s, as far as that goes, though our trainings are quite different. Teiko?"

"Yes, Commander?"

"Goddamn it. I wish to hell you would all stop saying that. Anyway—Teiko, your thing is the fundamental laws of social relations, right?"

"You are simplistic again, poor boy, but this is, yes, the general idea. The origin, organization and functioning of human society, yes."

"So why are you here, lovely one?"

"How carefully you make the compliments equal to all. Very ecumenical. I am here because we are a human society. A small one, but a society.

"Then which of you," Chris asked, addressing all, "can say why it is we were sent up here without love?"

They had talked about this some after Chris had first raised the question with Teiko. No one said anything right now.

Finally Julia said, "It might be an undesirable complication. Undesirable from Mission Design's point of view."

"Why they sent us here without love?" Teiko said. "Maybe to see if we would find it."

And it was the first night on the moon and they slept.

This is the third day of the night. After breakfast this morning I began to make a *go* board. Chris has been losing to Masha at chess and I think I should teach him *go*. I don't think I can learn how to play a good game of chess. Chris loses to Masha and he tries not to show that he is hurt by this. Why he is hurt this much I don't know, but I don't think it is because Masha is a woman. So I think I will teach him the game of my country. We will have to find something to use for

pieces, but Chris says this is no problem.

But if I teach Chris *go* I will beat him, because I grew up with this game. So why do I want to teach Chris how to play *go*? To hurt him some more? Certainly not—I know that. Though I cannot give him a good game of chess, I think he can soon give me a good game of *go*—maybe that is it. There is something in Masha's way of beating Chris that I don't think is good. She doesn't beat him all the time—Chris wins about two out of five. But they play too much.

TEIKO sat on a folding chair at one of the two tables. The lighting was not extravagant, but it was adequate. She had taped together four sheets of paper into a larger one and was ruling lines. Chris had been taking readings on the accumulators and was at the other table, plotting curves. He finished and rose.

"It looks good," he said. "Plenty of heat and light. You want to give Houston the report today?" He walked over to see what she was up to. "What's that?"

"A board for *go*. I will teach you."

Marya, who had been lying on the floor with the third lamp, studying test scores, looked over. There were two tables and three

lamps. Julia was reading at the table Chris had been working at. This conversation didn't interest her. She was reading *The Brothers K*, as she called it.

"How does it go?" Chris asked and Teiko outlined the basic strategy.

"We'll need pieces," she said.

"How many?"

"A hundred or so of each of two kinds of small things, small enough to be put on these—vertices—would be enough to start with."

"We ought to have enough small washers and nuts for that. No problem. Suppose you talk to Houston today, all right?" They had been taking turns at this.

"Give me the curves on the accumulators," she said. They were only three days into the night, but they all had a profound interest in those curves, neatly drawn lines on light coordinate paper, that told them whether they had enough energy to make it to the dawn. "That's the only important thing, isn't it?"

Chris nodded and turned on the rig.

I haven't been keeping a notebook—or notebooks—like the girls. That isn't part of my job. But maybe I'd best keep one for myself. Maybe I'll throw it away before we leave. There isn't a man alive, that I've heard of, who isn't cut down when he wants to bed his

girl and she says no. This is, and I understand that, a totally unfair and entirely indefensible attitude. But that's the way it is and that's the way it was when Teiko said no. You try to show that you're not cut up, that it isn't important. But it is and it always will be. So says the commander—and I wish they'd stop calling me that. Masha beats me at chess, but that's not where it's at. I borrowed a notebook from Masha to write this in. She's got notebooks the way some chipmunks I know have sunflower seeds. Enough to last forever. I see Earth up there. There's lot's of cloud and I'm not really oriented, so I can't see the chipmunks. Matter of fact, it would take one hell of a telescope to see a chipmunk from here. The girls' notebooks are for future study, and the enlightenment of society. This one isn't, damn it. It's for me. So, Dear Diary, you son of a bitch, it hurts. It do.

TEIKO and Chris sat at one of the two tables, illuminated by one of the three lights. Teiko's *go* board was between them. Julia and Marya were both reading at the other table, using only the second light. This saved energy. Chris had a hundred or so small nuts in a Dixie cup. Teiko had

the same number of small washers in a similar cup. You knew what hardware a colony would need.

"It is war," Teiko said. "You see? You must surround the—opponent—and capture him, so." She showed several ways how this could be done. "We start first using just a little of the board, because you not know how to play. But you learn fast, I know."

"Roger. Fire one," Chris said.

"You first," she said.

"Screw that. Girls first."

Teiko placed a washer near a corner on Chris's side of the board. Chris studied the position and set down a nut. This continued for a time, but not for long.

"You see how it goes now, yes?" said Teiko. "Better luck next time."

"Luck isn't in it, sweet girl, and you know it. Set 'em up in the other alley."

"What?"

"That's from a different game. Bowling. What I mean is, let's start again and maybe I show you something. I'm first this time."

Chris learned and he learned rapidly. By the time it was time to go to bed he had the fundamentals.

Bed, then—sleeping bags, rather—Julia and Marya sacked out on the other side, Teiko and Chris the way they'd been all of the nights of the night. The pleasant backdrop of the droning life-support. No more sleeping on top of the bags, as in the tropic day. Now it

was the arctic night. Chris put his bag close to Teiko's. Watch it, baby, he told himself. Watch it.

"I like that game," he said.

"I thought you would. We play some more tomorrow. We get very close together in here, yes? I mean, feet and yards. Why can't we go outside a little, look at the instruments—or something?"

"The suits aren't made for it, you know that. It's two hundred and sixty-odd below out there. We couldn't even walk to *Pearl Harbor* and back."

"Yes. I know the briefing. But we could go just a little."

"Go just a little and use up a lot of energy. You're not getting claustrophobic?"

"No, Chris. I just think it would be nice if we could take a little walk, that's all. You know. Back to the cave, all right? The females stay here and you go out and hit a bear over the head with a club. Haul it back to the cave and we all eat. Ferment something in its skull and we all drink. Back to the cave. The men couldn't stay in the cave—somebody had to go out."

Chris said nothing for a time. They looked at each other and out into the wild night, wild in its stillness. "I'm all right, Teiko," he said. "Look at me, am I not all right?" She nodded. "We're on a far-out trip," he said and reached for her hand. It wasn't hard to find. "I'm not going to crawl out of this—bag—but I am going to do

this. Unless you find a way to stop it. Teiko."

And he kissed her again. This was the second time. It lasted quite a while and it was tender. They went to sleep. And Chris, simplistic male CO that he was, poor boy (as has been said), didn't know what the hell was going on.

Teiko thought she did.

Julia and Marya were asleep, lost in their own wonders.

IV

This is the seventh night of the night, which makes it just about the midnight of the night. I don't think my purpose will be served on this mission. I don't think any of us is going to go bananas. Chris was put down by Teiko when he tried to make out and she said no. He tried to pretend that nothing had happened. And he didn't succeed. All men are hurt by a putdown, so why the hell not admit it? Anyway, Chris was put down, but he's not about to fold.

Masha and Chris have been about even in chess lately, but Chris has lost interest in chess. He's crazy about *go*, though he hasn't won more than one game out of four so far. I also think he's crazy about Teiko. They sleep together over there all the time. I don't mean sleep together, I mean

their sleeping bags are cheek to cheek and they talk a lot.

And I'm a little bit jealous, I have to say that. We change our sleeping clothes—or the lack of them—around, but Teiko and Chris are always together over there. Not that we're excluded—we'd be welcome close to them, I think—but that's the way it is.

The next colony doesn't need, I think, such a scientific bunch as we. Couples, maybe. In love, maybe, married or not—I don't know. I know I'm getting horny as anything—it's been a long time—and nothing I can do about it, unless I'm really interested in myself or in Masha. I'm interested in me, all right, but not in that way—and in that way I'm not interested in Masha at all. Though she is a nice person. And she's not going to blow her cool. I'm interested in Chris, but the key to that door is in other hands. And he must be raunchy as hell by now. So are we, but women put up with it better, the record shows. How to be the first psychiatrist on the moon in ten easy lessons. Or five hard ones. Old joke. I think I'm a little anoxic.

ON THE eighth day of the night all systems were go.

The accumulator curves were better than expected. There was residual fear of not enough energy, but this had no realistic base. Chris and Teiko played *go*. Julia read a lot and Marya brooded. The truth of the matter was that none of them had much to do except colonize the moon and tell Houston how exciting it all was.

Everything fell into the fan at 1:20 Local Time on the eighth day.

Marya, who had been sitting on her sleeping bag, looking outside, was restless for some moments. She lay down on her stomach. Then she lay on her back. Then she called Chris.

"Yes?"

"Chris." The way she said it, it came out more like Chrees and he liked the sound of it. "Chris. Something is wrong. I hurt very much—here." She put her hand on her abdomen. Chris examined her and asked some questions.

No way for it to be an appendix—I knew that and we all had our scars to prove it. No way. But it was sure as hell something and I knew, not wanting to know, what it was. It was catastrophe, internal disaster to Masha and to a small child forming inside her—and external cataclysm for the mission. I was the doctor, right? Right. So make with the tools. The sphygmomanometer worked well, but it told a

hairy tale. I kept thinking of appendicitis, knowing it couldn't be that, knowing that acute appendices do not arrive with this sense of drama, of urgency—they put themselves on stage with fewer kettledrums in the pit. I palped Masha's stomach. I knew I'd need help and lots of it.

"**H**OW did you bypass the pregnancy test?" Chris asked.

"A—friend in the lab," she said. "I'm sorry, Chris."

The other two girls stood beside the harried MOD—the Medical Officer of the Day. Every day and all night on this mission. He drew them to one side.

"Julia," he said. This is an ectopic, or I never went to medical school. We'll have to move fast."

"You're sure?"

"Yes."

"We can't operate in here."

"If we don't we've got a dead Masha."

Teiko went over to hold Marya's hand.

"This isn't exactly an OR at Massachusetts General, but we're going to have to make do. Good thing they threw in the surgical kit at the last minute. We'll use intravenous nonathal. You know where it is, get going."

"I don't know how sterile this amphitheater is, chief, but if you

say so—" She got going.

Chris checked the big book and saw that the number on the box they needed was 517. "Teiko," he said. "Would you get box five-seventeen from that stack over there?" He went to Marya and told her what they were going to do. He placed the two folding tables together (casting the unfinished game of *go* aside with regret) near Marya's sleeping bag and arranged the three lights. He placed two sleeping bags atop the tables. The first operating table on the moon.

"We need another table," Julia said. "We don't have one, so I'll put things on these chairs."

"Yes. But where the hell is five-seventeen? We need it now. Teiko?" Chris kept his voice low.

"It isn't where it's supposed to be, Chris. I sorry."

"All right, we'll find it. We'd better call Houston. Teiko, would you do that? I'll get that damned surgical kit and we'll put this show on the road."

"What shall I say?"

"Say that Masha has an ectopic pregnancy and we're going to operate. If we can find the equipment."

As the other M.D. on this trip I did what I could while Chris and Teiko looked for the box that wasn't there. Chris asked me to look for the check list. I found it and everything

on it was checked off, but box 517 wasn't on the list. A last-minute addition. Chris told Teiko to get Houston and took the microphone from her.

"We've an ectopic pregnancy here," he said, "and the surgical kit, thrown in at the last minute by the infinite wisdom of Mission Design, wasn't put on the check list. Right? So I'll have to go out to *Pearl Harbor* and get it. I may get it or I may not. But heads best be rolling in the sand down there before the next hour has run its course and this is the last you'll be hearing from us for some time. Yes, I know the tests were negative. I'll tell you later."

He shut off the rig.

"Keep Masha as comfortable as you can. I've got to get that misbegotten box out of *Pearl Harbor*. I'll be right back." He prepared to suit up.

"You can't do it," Teiko said. "Remember what you said when we were talking about going out for a few minutes?"

"We do what we have to. What I meant was we couldn't—I couldn't—take a pleasure walk out there for the hell of it. But if it's something we have to do, we damn well do it. All right?"

"No," she said with authority of endless generations of Japanese

women behind her. "No. Is not all right. So. You will go, but I will go with you."

She reached for her suit.

Chris protested, but she had him dead to rights. It was chancy to go out into that cool, but that it could be done lay within the fringes of possibility. If Teiko went to hold the torch, leaving Chris free to locate the box, it would save seconds, maybe even a minute. Chris alone might fail, but the two of them might make it. Or die out there together, box 517 halfway from here to there, haphazardly dropped, sitting useless on the lunar soil. I did what I could for Masha, which wasn't much. I got the lot set up. Some operating room. Earth almost full up there and I'm waiting for sterile gloves and surgical instruments, masks and gowns. All put the hell into one box 517. They turned the temperature controls of their suits all the way up and I watched them leave.

"IS NOT cold at all," Teiko said, halfway to *Pearl Harbor*. They were on local circuit—Houston heard none of this.

"You didn't have to come."

They approached *Pearl Harbor* and the chill began to come through. "No. You so right, al-

ways right, Commander. I didn't have to come and you didn't have to go. We even, yes?"

The hatch was still open. Why not? Teiko pointed the light and the box was there.

"Ah," said Chris. "There you are, you bastard."

He fumbled it into his gloves. They started back.

"Do you know what cold is?"

"Now I begin to know, I think. I also think we can make it back. You?"

"Yes."

They didn't talk after that, but they found out what cold was, though the life-support systems were putting out every joule at their disposal.

Being cold was like being enclosed, for openers, within a block of solidly surrounding ice. Enclose this, then, within larger blocks, the mass of ice expanding outward. Then it begins to grow inward, to include every part of your body that has sensory end-organs. The lymph congeals and the blood solidifies. Then the ice begins to melt, but you know it only seems that way—it really means that you're about to buy the farm and can't feel anything. Then you think how nice it would be to lie down and go to sleep.

They made it. Just.

By the time I was warmed up Chris was operating, Julia helping him. When I could I

went over to see what they were doing. They told me to put a mask on. I did and then I could go close and see.

It was so sad. Masha's baby had decided to live in the tube and not where it was supposed to, in the uterus. Womb. Chris cut her open and they took lots of blood from the peritoneum—yes, I had training here also and knew most of the words. Tie off the bleeding points, remove the tube, but save the ovary if you can. He did. Antibiotics systemically and topically and the drip drip drip of the glucose, slow in the lunar gravity. The first lunar hospital. How many firsts are we to make on this mission? Not the last one yet, I think. I wish I had let Chris come to me that night. He won't do it now, I think.

"Houston from Nectaris Base."

"Roger, Chris. About time, may we say?"

"Best not to lose your cool, Steve. We've had a problem up here. Or down here, according to your parameters."

"We somehow gathered that, Chris. Would it be within your capability to report?"

"My goodness. We really got you up tight, didn't we? Sorry about that. However, this is how it is..."

He told them. And that was the beginning of the end of the eighth day of the night.

CHRIS moved his sleeping bag next to Marya's. It was fitting that the surgeon be near his patient. Julia came close and so, somewhat later, did Teiko.

Marya was out of the anesthesia. "I'm sorry, Chris—I really am."

"I know. You wanted to make the mission and you did what you had to do. No sweat. I'm sorry you lost it—if you wanted to keep it, Masha."

"Yes. I did."

Chris is tired; Teiko thought.

Chris is tired and he's still put down, Julia thought.

Chris, Marya thought, took my baby from me. He had to, I know.

They were so close they could all touch each other, though Marya wasn't interested. She was about out.

Chris said, his hand vaguely on some part of Teiko, "I wouldn't have made it back if you hadn't been there holding the light. You were right. *Domo.*"

"*Doitashimashta,*" she said. "We do it."

"Julia," Chris said, "you're a competent scrub nurse. I really didn't know that—it isn't in your profile."

"Screw profiles."

"Yes."

There was a closeness.

We tried to go to sleep, but Masha was the only one who really made it. After all, she'd had major surgery that day and was well downed with pharmaceuticals. I like that word—why say drugs? I pretended I was asleep, but they both knew I wasn't.

Chris said, "I'm going out for a while."

Teiko: "Again?"

"Just down to the pub for a pint of bitter. Be right back. Or just to hit a bear over the head. All right?"

Chris checked Masha, saw that I was right there, not quite asleep. He took his suit from the rack and put it on. It was—as I'd been the first to point out—cozy inside, the four of us together there, warm. A bad problem coming into us and being solved, thrust out. I checked Masha. She would be fine, just fine. No baby, not this time. But The Mission survived. And why should that matter so much, I wondered, but I knew that it did. Chris went out.

Teiko moved her sleeping bag to the other side of the pillar. She moved Chris's bag also. She looked at me. "You understand?" she said.

"Who knows?" was the best I could do. My civilized genes don't go back as far as hers. She held my hand and we

watched Chris clomp about out there, near the dome. He looked up at Earth and he looked at all of the lunar horizon. He seemed to raise his fist and hurl it into the night.

He broke the lock and came back home. He checked the accumulator curves. He checked that I was half awake and was looking after Masha. He knew where Teiko was and that was where he went.

"Chris?"

"Yes?"

"It's cold out there."

"Yes. Why did you go again?"

"To hit the bear on the head and bring back meat."

"To the cave."

"Yes."

"What is it like to be alone out there?"

"Don't knock it if you haven't tried it. Not as nice as here, though."

"They sent us here without love."

"Yes."

"They blew it."

"Or made it," Chris said.

Earth, home, was up there, somewhat past full, but there were clouds and they couldn't see the Virgin Islands.

"So we found it," she said and they did. And that was the end of the eighth day of the first night of the first colony on the moon.

After that nothing went according to plan. ★

JOURNEY

SONYA
DORMAN

Success is something
to celebrate—if
you live . . .



I HAVE lost something. I have lost something very dear but it must be far gone in our history for me to forget it. Our camp is down in the foothills—from here we can see the blue maze of meadows and scrub woods of this planet. It's good to get away from our technologies for a while, though we're all secure in the knowledge that they wait our return.

Bern Benn, the tour leader, is shouldering his pack. We're ready to climb the trail again. "Let's go then," Bern Benn says, with his sherbet smile, more cool than sweet, I think.

Our small group is made up of technologists all secure in our positions. Home waits for us back on another planet with orders, co-workers, everything smoothly running and sliding together, which is why we have come out here to look at strange birds, pick up burrs (longweed, with yellow spikes), blister our heels in new hiking boots, eat sparsely by smoky campfires. For a little while we relive our primitive histories.

The trail winds up over grasses and rocks. There are a few plants that have pale blue blossoms which remind me of something I have left behind. When I was a little girl I treasured each piece of smashed plastiglass or burnt rubble, but the pleasant complexities of adult life have made this treasuring of things unnecessary. We all travel light and

travel far and we never pick things growing by the way.

Moshe Snow, the cyberneticist, and Alma, the neurochemist, come alongside as the trail widens. They are a pair, as we all fondly know. "It's good out here," Moshe says, breathing deeply of the air, which hasn't as much oxygen as we like, and that is part of the lure of the tour.

Alma is a skinny thing, with fingers like bones, and a small, somewhat lined face; she is sweet like the pale blue flowers which remind me. But I forget.

"I love this," Alma says, her boots going *thunk! thunk!* as if she had a lot of weight to put in them.

Everyone is happy. The day is just beginning and our leader is a happy, homeless man at the head of our group, stomping manfully up the hills. To him this is an old story.

Moshe gestures up toward Bern Benn. "I keep wondering what he thinks of us with our new boots and creased pants—he has to teach us such simple things, like the way to put the firewood so it burns."

"Always a draft," Alma says, imitating Bern's voice.

"He's very efficient," I say, not wanting anything to become rough or sticky. "He certainly knows what he's doing."

"I should hope so," Moshe says. A little contempt in his voice? I don't like that. Bern Benn is as good at his job as I am at mine, taking apart the particles of an

equinox or predicting the solar winds. Weather Person that I am, I can recognize another expert when I meet him.

Alma and Moshe slowly draw ahead of me on the path, catching up with Sonol, who has been forging onward. Behind me the older man, Tarrold, is climbing and practicing breath control. It makes his mouth a funny shape, but I don't laugh, because we have been friendly.

Suddenly a fluster of birds goes up from the shrubby growth on our left. Binoculars are swung up and we pause to look, to call out to each other, comparing notes on size, color, shape of the beaks. Their beaks are thick and hard, for they crack the *unwit* seeds out of the rock crevices. We, too, have tried *unwit* seed roasted in a pan over the campfire. They are tasty enough, but no one experienced anything from eating them. Perhaps because we were all so relaxed after a day of hiking that we could hardly relax any more.

We reach another bare ridge by the time of our noon meal. Packs come off. We sit in a ragged circle, chatting about the birds and plants. Bern has collected a pocketful of *unwit* seeds. Eaten unroasted, they are rather bitter, but quench the thirst. I pop some of them into my mouth and crunch them while the meal is being laid out by Bern and Hagne Benn. They work well together, shifting burdens back and forth, finding rare plants, knowing

the names of everything we're interested in.

Hagne goes around and gives out the rest of the seeds for those of us who are still thirsty, before the water is sluiced out of the evaptank for us. Pale sunlight glitters on the fuzz of blond hair at Hagne's nape. I think it's comical that she and Bern have the same hair, as if they had made it so. But they are nice, direct people and like to show us this different land.

I SLOWLY crunch up the seeds, feeling my mouth become cool and less parched, watching the distance for a different bird; listening for a sound, the unfamiliar, the odd, that we came here for. I have lost something precious but it no longer hurts, whatever it was.

Oh, you, you are a person at a great distance. There is an intolerable distance of parsecs between us then, and us now. The sun is moving rapidly and strikes my face, blow after blow across my cheek. The seed has a bitter, quenching taste. Under my head the tufts of grass are coarse and wiry. I remember you were doing something green with your hands, causing growth. Then they came and shot you. Or was it poisons? Your hair was the color of mercury before you died.

"Well! What's the weather to be?" Tarrold asks, sitting down beside me with his smile and his old boots, for he has hiked before. I'm

sure his boots hang by his door at home, to show everyone how they have been used—what he has is very nearly an addiction, but he doesn't apologize. Well, I like a person who makes his choices, covers his tracks, travels light with good boots and tested ideas.

"This isn't my atmosphere," I murmur, lying in the sweet grass, which is long as hairs around me, though a moment ago it was tufted and springy. Something green used to grow and we kissed—there were seasons and root-groups, plants and people. I can't imagine being rooted in one spot and always with the same faces near me. Though of course the word "imagine" is no longer of use.

At the upper end of our circle there seems to be an argument, voices breaking out. I don't want to listen.

"It was a mistake," Hagne's voice sounds clear. I watch it go up like a flight of birds, soaring, a luminous streak through the whitish air.

Bern walks down to us. "The seeds," he says. "Have you eaten them all?"

"Long ago," I say and stick out my tongue to show how empty it is. Not a word or a hull on it.

"They're best roasted—we won't eat them raw again," he says.

I can't be bothered to say anything more, lying in Tarrold's shadow with an arm over my brow, looking through the rainbows of my

hairs to the sky overhead. Something is gone and I miss it.

"What's wrong with the seeds?" Moshe calls out as Bern passes.

"Their effect is inconsistent with your lung function," Bern replies and continues on his way to distribute the foods.

With one hand I touch the base of my throat where the purifier was implanted years ago and I see that Tarrold has made the same motion. It's instinctive, I suppose, especially among technologists, who realize how adapted we are. Ordinary people eat, sleep and die without a thought of thanks.

Hagne brings the food down to us at our end of the group, and I push myself into a sitting position in order to swallow comfortably. It's still a little before noon and above us lie the slopes toward the big hill where we'll camp tonight and fare rough. Each time we look up that way we feel a shiver of excitement. Up there is far beyond the experience of most of us who remember our flattened, smoothed, slippery home planet where wheels do everything. Here we encounter all kinds of irregularities; that was why we came, to step up, to force the muscles, to empty the mind. Not to imagine, that illusionary function, but to experience prime reality, each of us with his own brain.

"What I like," Tarrold says suddenly, in a voice of consummate despair, "is being so alive together."

He shocks me and I stare at him, but he's gazing down the slopes and his jaws are munch-munching the food.

"But aren't we always alive together?" I ask.

"Yes, of course." He flicks a small look at me and goes back to staring down the hills again. Then he wipes his hands on his knees with a consciously vulgar gesture and says, "This is my last hike."

A funny thing for an addict to say. "You'll be back," I assure him. "Here or on another planet somewhere—you won't stop. Haven't you been doing this for years?"

"Years," he repeats.

"Years," someone else says and somehow I reinterpret it: "tears," or "fears," or other words that rhyme and beat on my breastbone.

"Years," Tarrold says, pinching the ridge between his brows with thumb and forefinger.

Fears ago I had something green, such as the stuff now crushed under my boots. When I look back it has sprung up again in my wake—my passing hasn't made anything different, which is a great relief. Like all of us, I avoid damage whenever possible. When one can't avoid it at least it need not be commented on, mourned or balladed about. That way lies the old danger that nearly destroyed us. Tread lightly, travel fast, make your choices and go. Like the implanted purifier, these concepts are the saving ones.

We hike on, occasionally stopping to examine a plant or look up to see some flying thing. The air at one place is full of weed seeds traveling the air currents, spiky dark things flying from one place to another.

"Little space boats," Kissie says, laughing, capturing a cluster of them in her hand.

"Oh, don't," Hanson says, but she hasn't hurt them. She opens her hand and gives a toss and they fly out into the air again and continue their journey unaffected.

So we rise smoothly and calmly on our own muscular power into the bands of blue hill, where the growth is less, the air cooler, the rocks more numerous, slatey dark gray. Bits of the rock break off under our heels or we scrape our boots across them and leave hieroglyphs, which some following group may read. Yet I see, when I look ahead, that the rock before us is clean and untouched, though twenty tours a year must come here.

WE STOP for a moment. Pernt Yollo's pacemaker has to be adjusted, so we gather around him, trying not to be impatient while he removes wires, puts wires back. Hagne gives him a few lungfuls of precious oxygen from her hand tank. One corner of his mouth twitches, but it often does. We ignore it, because he's a Central man, one of the builders of the Computer Expander. While we wait with the

pleasant faces we've put on, each of us is counting the lungfuls of our emergency oxygen he uses.

"Let's go," Bern says. He leads us—Hagne brings up the rear and between the two bronzed, blond guides we're well watched over and cared for.

It's a little monotonous, but makes for peaceful thinking, all this steady upward tramp. I was thinking of last year when that person Kage had said to me, "Gaia, I'm remorseful with lust for you—" and I unfortunately laughed. So often I do, so unfortunately. It is often a humorous occasion, such as buckling yourself into a watch rocket and someone mumbles in your ear, "Oh, I am perishing of persistence for you," and off you go into the storm center, leaving him to perish with someone else. Like the rocks we think we are marking on this climb.

The air and the sky are as calm as we. This is a stormless place. I would have nothing to do if I lived here. Fatal! Man is born to function.

Toward late afternoon we have risen into areas of sharp black rock. No plants here and it's cool enough to wear our parkas. A little frost sparkles in crevices. A good campfire will be welcome tonight.

"We must make it before dark," Hagne urges us and we keep climbing through the longest day we've spent on the trail so far. Even the hardest of us begins to weary

and droop. From the front Bern Benn pulls us along with his voice, the hale gesture of his arm—from the rear Hagne urges and presses us forward. Pushed and pulled, toiling in a line, climbing and climbing. By the time we make camp we're tired enough to be silent. The mountain looms over us, darker in the dark.

Soon the fire leaps and dances in the night. Kissie and Pernt help to pass the food around. For a while we're busy with it and there's no need to talk. Hagne and Bern set up our beds in a ring around the fire. Some of us roll into the beds right after eating and fall asleep immediately. Others stay grouped at a little distance and talk softly of how beautiful the dark is, being strange—how splendid the day behind us, how miraculous the day to come.

The ground bed is so soft I sink into it, down and down, wearily, thinking about how I, have lost some darling, but not what or who—I don't remember.

It's bright day when I'm wakened by voices joining and separating in some conversation, piercing the clear, icy air. I lift my head and see our group standing together. I slide out of my bed and stamp into my boots, which are cold, and walk over to the group. Moshe, who was a little contemptuous, is lying on the ground, quite dead.

Bern and Hagne carry him off the trail and lay him in a fold between rocks. Above us the mountain

looms greenish black. We surround the campfire and eat our morning meal, then all take part in packing up the gear. It's not expected of us but all along we've liked to do our part. It seems to come natural on a trip like this.

When we have put on our packs we start upward. Moshe's long, thin figure lying between the rocks soon disappears like yesterday behind us. The air gets colder. It seems to get paler, too, though the sun is strong.

After the first hour we stop for a short rest, gathering together to look back down the long slopes we've climbed. Then each of us looks over a shoulder, looks upward, cranes, stares, lowers eyes from that peak. I do this, too, comparing the climb behind me to the one ahead, comparing how it advances before us to how our day's work vanishes behind.

"A beautiful day," Alma says.

"Perfect. Just the day for a hike," Hanson agrees.

"Let's go, then," Bern says and Hagne walks down to the end of our line to watch over us.

In places we're able to walk two or three abreast and exchange a few words, but more often we have to go one at a time, and we encounter some steep parts where we must lie almost flat along the rock and grip with toes and fingers, pull and push, feel ourselves glow, our blood run furiously. Then again we come to a dell or flattish spot where for a time we can move easily. It is at the end

of one of these places and starting a harder slope that I notice Pernt Yollo fling a hand out behind him, as if throwing something away. Whatever it is, it gives a fiery glitter in the air and goes.

Bern Benn is already at the top of the next rock face, waiting for us one by one to join him. I, Tarrold, and Kissie, with Hagne behind us, cross the open space, as Pernt comes to the rock. He puts both hands flat against it, gently, then his face. Then he slips down and lies still. He will not use any more of our emergency oxygen.

Bern slides down the rock, braking himself with his boots. He looks questioningly around. We had seen nothing. It just happened.

"Let's go on," Bern Benn says.

And behind us Hagne Benn says, "Let's go!"

WE STOP in a while for our noon meal. The ground is all rock—dark, glittering, hard as iron. We're eating and resting when a noise begins in the distance. We're so startled by the familiar sound that we duplicate each other's gestures. Hands full of food pause in mid-air, heads tilt back, eyes look up.

A fleet of bright green merchant ships. The world becomes familiar as they pass over. Nothing is strange any more—home is almost just around the corner. We're able to get a strong grip on our identities without understanding how close

we must have come to losing ourselves on the climb. Although, after all, that's what a vacation is for, at least to some degree. The ships disappear and soon their sound is gone, too. We finish eating, loll at ease for a little while and then comes the usual call for us to go on.

We're commencing the final part of our hike. Tarrold moves up to my side and touches my shoulder. "Goodbye, Gaia," he says and sits down where he is. He will not despair again, or try to share that shame.

"Goodbye," I say. When I look down from the next steepness he's lying curled up on the rock, and frost has already formed a web of white lace over him.

Bern loosens his rope and we use it to help us up. Kissie nearly floats free at one point, like a weed seed, light in the air. But she gives her laugh, clings to a spike and goes up, over the top beside Bern and Hanson, and the rest of us bend our heads and pull and push. At the rate we're going it will be close to dark when we get up there and that would be too bad, for we've been told about and promised as fine a view as we've ever seen.

"Can we make it in time?" Sonol asks. Bern smiles and says, "Yes, if you'll put a little extra into it. We have some hours of daylight left. But no fooling around if you want to see it all from the top before tomorrow."

After that there's no stopping.

We heave ourselves up, burn our hands on the rope, scrape our knees on the rock, grow thirsty, hungry, tired, and each one of us gives up looking back or even looking ahead.

Up there Bern Benn encourages us with shouts of, "Let's go on, then!" And behind us Hagne coaxes, "Go on, go on!" I suppose one of the few thoughts we have is that we're lucky to be with those two, who know what they're doing and can help us.

The last towering mass looms over us. We stop involuntarily, every one of us, for a moment, to look up. It's very still up there. It seems to be absolutely silent. The silence is an enormous mass that waits for us.

"Let's go."

"Go on, then."

Up we go, bruised legs throbbing, hands half frozen and cramped into grabbing shapes as we take advantage of every crevice and bulge for a better hold, a safer grip. Bern vanishes into the silence. Then Alma. Then Hanson. Up we go.

One by one, over the last rock at the top.

"Surprise!"

"Happy holiday hikers!"

"Vacation's over!"

"Welcome! Surprise! Happy hiking!"

Oh, the funny people in their shiny hats, the dear, comical dancers and acrobats, all jumping up and down and turning somer-

saults in the air on top of the mountain. Red and yellow streamers float and fall over our heads. Noisemakers, firecrackers, confetti, the popping of corks from wine bottles, kazoos, surprise!

Bern and Hagne lock arms and dance, Sonol and Kissie with some of the others weave in and out in a jiggling line. We all get caught up in the celebration, tossing our boots into the air, throwing our canteens down off the rocks. Everyone does split jumps and yodels—everyone shouts, swigs from the bottles, throws paper flowers at his neighbor. As I join hands with a funny little woman who has a purple nose, somewhere off on the far side of the gallivanting group I see a face that reminds me I have lost my most precious and most dear, but the reddled old woman pulls my hand.

She cries, "Come on, Gaia, you want to dance?"

Hagne cries, "Come on, let's go!"

My feet begin to stutter and jump. Someone passes me a bottle and even while I dance I take a great mouthful. Oh, it's fine, wonderful—my nose turns purple and the veins bulge in my legs—we're all wonderful people in our conical hats. Everyone shrieks with laughter and approval. It's marvelous. A journey is completed once again and once again we're with our friends and peers. Those of us who deserve it are celebrating another success.

★



GALAXY BOOKSHELF

Theodore Sturgeon

IT IS always a pleasure to drop once again into what I call the "peripherals"—books forwarded to me largely because the various (and believe me, they are various) powers-that-be just don't know what else to do with them. When they aren't mainstream of any kind, or western/detective/pornography/kiddies/politicals et some other cetera, these "different" books have practically no good chance for review. So off they go to the sci-fantasy slot—sometimes, one is sure, as a conscience-freeing substitute for the incinerator for people who wouldn't think of burning a book. And sometimes in the hope that maybe, after all, the science-fiction reviewer might discover what the book really is and maybe that it even has merit. And that's good. The most original thought comes always from the frowning edge (even if the best art does but rarely); discoveries and re-discoveries are most often random

dots around and ahead of that well-scored curve on the graph before they become large or numerous enough to divert the line and be included in someone's category. "Peripherals" is all the categorization I accept willingly anyway—sticking things into cubbyholes is the most damaging preoccupation of our modern psyche and I hate it a lot. Hence a report like this.

The Book of Strangers, by Ian Dallas (Pantheon, \$4.95) has a novelistic icing for a rather unusual (in Western culture) How-I-Was-Saved cake. The icing was what sent it to my desk—the protagonist is a specialist in a State Library at a near-future time when books have all but disappeared in favor of microfilm and computer-retrieval. To search for a book he secures a leave of absence, learns through a series of encounters on his journey that the book is its writer and the writer is himself—a sequence which was, in substance, old before *Candide*.

The cake under the icing will not be to everyone's taste, for it deals with enlightenment of Islam and Sufism and how it feels to be bathed in the inner radiance pouring from an endless succession of holy masters in beggars' rags. There is a humorless breathlessness in the style and a hunger for personal subjugation, which I find abrasive. Maybe you won't.

PASSPORT to the *Supernatural*, by Bernhardt J. Hurwood, (Taplinger, \$7.50) is subtitled "An Occult Compendium from All Ages and Many Lands" and earns a permanent place in my Where Do You Get Your Ideas? file. Part scholarly treatise, part anthology of weird, horror and ghost stories, the book is a journey of adventure and discovery on many levels. We in sf have been called the mythmakers of our time. All times and all cultures have produced theirs and it is astonishing to see both the similarities and the differences between stories whose sources are widely separated in space and time. Siberians and Persians, Chinese and English, ancient and modern, have fabled the hours and centuries away to teach and to entertain—and the stories they tell, the truths they illustrate, say much about the human condition as it remains the same (in preoccupations with love, death,

fear and laughter) and as it changes from time to time, from place to place. Put a Malayan underworld side by side with Dante's, for example, or the were-fox of China with the tiger of Siam and the wolf of Transylvania, and you will be overwhelmed by the fellowship of people everywhere, everywhen. There's something here that is, I think, profoundly important—something that cannot be dismissed by proclaiming that of course it's nice to be safe and warm under the blankets while engrossed in tales of someone else's terror and torture and to be deliciously menaced by the Shadow Under the Bed—it makes one safer and warmer. Don't deny this—accept it and go on. And then begin to wonder about patterns, about why so many storytellers in so many lands and times have pointed so strongly to certain areas: to powers beyond our comprehension, life after death, alien entities with superior knowledge and abilities. Reduce these yet again to some kind of denominator and you'll find that the underlying statement is that there *is* more beyond, that there *are* power sources known to certain individuals and entities, whether it be a weremaiden to come to your bed (Chinese) or the skull of a murdered woman that will, in vengeance, go for your throat (Eng-

lish). Virtually all these tales are proclamations of the existence of *plus ultra*. (And so is the bulk of sf.)

For every thousand tales that make this proclamation there is perhaps one that makes an effort to explain it. For every thousand of these there is somewhat less than one that has no axe to grind—that does not say “The phenomena are God’s and Jesus is the way,” or “Allah’s” and “Islam. . .” or “en-gramic” and “Scientology. . .” or “History’s” and “Marx. . .” Do you know of one single book that (a) accepts the existence of that which drives the mythmakers and (b) makes a dispassionate, reasonable and scientific inquiry into same?

I KNOW one. *Consciousness and Reality*, subtitled “The Human Pivot Point,” edited by Charles Musès and Arthur M. Young, (Outerbridge and Lazard. \$10.00) is such a book, a book so provocative, with spectrum so wide and levels so many and so deep, that to describe it adequately is quite impossible.

First of all, the contributors to the volume (ten years in the making) carry heavy credentials. Dr. Musès is an associate editor of the *Journal of Bio-Medical Computing* (London) and editor of the *Journal for the Study of Con-*

sciousness. Arthur Young is a Name in aviation history, having been a developer of the helicopter in the '30s and '40s. Here is a melding of mathematics and hard technology, philosophy and the sciences, poetry and sharpest prose, usually found only in super-individuals like Bertrand Russell. Both highly articulate and meticulous thinkers, Musès and Young have gathered together an impressive display of original thinking. Skimming the long table of contents, we find such things as an eyewitness account of fire-walking in Ceylon, trance-induction techniques in ancient Egypt, a theory of ESP, recognition of reincarnation and the supraphysical body (fascinating, this one!)—then there are cases of hyperdimensional awareness, awareness in plants (J.C. Bose wrote this one) and the possible meaning of imaginary numbers. Nicole Maxwell writes an exciting and sensitive account of her search for pharmacologically valuable plants among the South American Indians. William Ernest Hocking reflects on immortality, Joel Elkes on language and the psyche. Charles Lindbergh’s essay on human potential is beautifully written and a splendid statement of one man’s evolution of mind and convictions. Kenneth Demarest, using a large collection of illustrations from the far past,

delineates "New discoveries of an ancient path to enlightenment and regeneration." . . . In reading over the above partial list, I feel a kind of despair. I must assure you that this is not a compendium of kookery like flying saucer contact claims, but a wide-ranging anthology of serious and significant thought—and that it won't be beyond my arm's reach as long as I have one.

WITH the possible exception of Arthur Clarke, there is no one alive who writes more knowledgeably and more lucidly on aerospace than Martin Caiden. Or just more, for that matter. His new book (*Destination Mars*, Doubleday, \$7.95) lists 55 non-fiction books and eleven novels (one of which is *Marooned*, which you may have seen as a movie, and another of which is, I'm told, destined for the screen and a TV series, called *Cyborg*.) Years ago he held me entranced with his appearance on all-night radio in New York. He knows and loves flying and space and their technology. His personal opinions are strong and clear and invariably well-grounded. His new Mars book is a real achievement, for it is not only a documentation of the effort to reach the red planet and an intriguing study of the strange globe itself, but a structured

piece of excellent and compelling prose. He takes you through each phase of Mars exploration with a marvelous gift for immediacy. It's like reading, say, an account of one of Magellan's voyages, not from the altitude of one who knows it all and how it came out, but with the viewpoint of a day to day, week by week participant in the excitement and the discovery as well as the challenge and the wonder.

No more meticulous account of Mars and the Mars effort exists for the interested lay reader. Although we are into an explosion of new concepts in sf and new ways of exploiting them (a development I heartily welcome and applaud), the old hard-core sf is not dead—and may it live forever. A book like Caiden's is wanted and needed for this and I recommend it most highly for readers and writers alike.

AND I'll end this account of unusual books with George Alec Effinger's *What Entropy Means to Me* (Doubleday, \$4.95.) Years ago Philip Wylie wrote *Finnley Wren* and called it "a novel in a new manner"—and indeed it was. And so (without being the least like Wylie's) is Effinger's odd book. Frankly, I don't know what to make of it—and yet I must recommend it, for it is written well and in

some parts beautifully. It is saved from being "special" or precious by its wonderful whimsy, its deftness. It has about as many levels as any reader is capable of finding in it, probably a few known only to the author. Clearly he had a ball writing it and he shares his joy generously. To ask me to report accurately on it is to hand me mallet and chisels and a block of granite and ask me to do you a soap-bubble. I can say that the narrator, Seyt, who lives on some kind of Earth—which is not this one, but something very like it in a number of appalling ways—has the duty of writing an

account of his brother Dore's quest. This quest is to go to the source of a River at which entropy itself can be found. Since Dore never comes back, Seyt must make up the narrative out of his head, with his innumerable family (and a weirder collection of weirdos you have never encountered) kibitzing every word he writes, as he writes it. Dore meets this Glorian, who becomes his companion, helps him lose his sword, pursue and find it again, and who often turns out to be someone else. Well, finally they arrive at the end of the River, where—oh, hell. Try it. You'll like it. ★

THE DUTCHMAN

those remaining were still blue. Astern, dim and distant, the Rim Stars reappeared.

And the figures in the screen were now in red light: 999999... 999998... 999997...

"Sir." Willoughby, the chief officer was pointing. Out to starboard, just abaft the beam, was a star where no star should or could be—a point of greenish radiance that steadily brightened.

"Captain! Commodore!" It was Madam Swithin's voice. What the hell was she doing in the control room?

"Mr. Wallasey," said Listowel to his third officer, "please escort this lady down to her cabin."

"But, Captain," cried the mis-

(Continued from page 137)
sionary, "this is most important."

"So is that," he said, pointing. "I've no time to spare for—"

"That," she interrupted him, "is what is important."

"Mr. Wallasey—" began Listowel.

"Let her stay," said Sonya sharply. It was more of an order than a request. "Let her stay."

The young officer looked uncertainly at his Captain, at the commodore, at the commodore's wife. He looked again, questioningly, toward Listowel. But the master's full attention was on the strange light. It was closing on a converging course. And there was something solid, or apparently solid, in the center of that glowing circle of

blue-green mist. A ship? Grimes had found a pair of binoculars, had them to his eyes.

Yes, a ship.

MADAM SWITHIN was speaking again, but the voice was not her own. It was male and had a strange, guttural accent. And the language was one that Grimes did not understand, although it seemed to be of Terran origin. German? No, he decided. Although there were similarities.

"Who are you?" Sonya was asking. "Speak so that we may understand."

"I can not rest. I must not rest. Effer. To sail der seas vas I condemned, for all eternity, vhereffer and vhenegger dere are ships—"

The seas? wondered Grimes. *But space is a sea...*

He could make out the hull now through his glasses—high-pooed, with a tall forecastle. He could see the line of black-gaping gunports and the three masts with the square sails at fore and main, the staysails and the spritsail, the lateen sail at the mizzen...

This was no listjammer.

"Kapitan!" that deep, urgent voice was commanding, "Starboard der helm! Starboard der helm!"

But an alteration of course to starboard would make a collision between *Pamir* and this apparition inevitable.

"Kapitan! Starboard der helm!"

And in the old days when the helm, the tiller, had been put to starboard both rudder and ship had turned to port, Grimes remembered from his reading. Even after the invention and introduction of the ship's wheel those topsy-turvy steering orders had persisted for quite a long while.

In the old days, the days of the windjammers...

And hadn't there been a legend about a Captain Van... What was his name? A Dutchman?

He laughed softly. "A ghost," he murmured. "A ghost."

Listowel laughed with him. "A bloody Rim Ghost. I should have known. I've heard enough about them. Phantom ships from alternate universes—"

"Kapitan! For der luff of Gott, starboard!"

Listowel laughed again, contemptuously, "That thing can't hurt us. I'll not risk my spars and sails, my ship, for a silly, blown-away phantasm!"

A spurt of orange flame leaped from the archaic ship's forward gunport, followed by billowing dirty white smoke. The Dutchman had fired a warning shot.

"Listowel, bring her around to port at once," ordered Grimes.

"I'm not running from a ghost ship with ghost cannon, Commodore."

"Bring her around, damn you!"

"And you can't order me in my own control room—"

"Legally I can't—but I do order you." Had Grimes known how to handle the lightjammer he would have tried to push the younger man from the controls. But he did not know. The only thing in his mind that could be of value in this situation was his memory of the old sailors' tales.

"Kapitan! Starboard der helm!" It was a depairing cry in that strange male voice from the lips of the medium.

"He's warning us, Listowel!" cried Grimes. "The old legends—you've read them. I've seen your bookshelf. The appearance of the Flying Dutchman before disaster... The ships Vanderdecken were saved from disaster by a ghost ship's warning! Come to port, Captain! Bring her around to port!"

Realization dawned on Listowel's face. With a muttered oath he dropped his hands to the console. He worked fast now that it was almost too late—with desperate urgency. He trimmed the east sails, not bothering about precise angles, bringing all five of the great vanes around as fast as the trimming motors would let him, presenting their light-absorptive surfaces to the radiation of the Llanith sun. *Pamir* lurched as she fell off to port. The mast whipped violently and the royal was ripped from its yards, flapped ahead and away from the ship like a bat into hell. But the rest held as the ship pivoted about her short axis.

And Grimes, looking out to starboard, saw the Dutchman vanish like a snuffed candle—but not before he had glimpsed the tall figure on the poop, his long beard streaming in the wind (here, in interstellar space, where there were no winds but the star winds!), his right arm raised in a gesture of farewell.

"Well," muttered Listowel shakily. "Well—" Then: "Is it all right for us to resume course, Commodore?"

"I—I suppose so," replied Grimes. In a stronger voice he said, "I shall ground the lightjammers until a thorough survey has been made of this sector of space. There was something there. Something we just missed."

On the deck where she had fallen, where Sonya was supporting her head and shoulders, Madam Swithin began to stir. Her eyes opened, stared around her. "Where am I? What happened? How did I get here? I came all over queer and I don't remember any more—"

"Everything is all right," Sonya told her.

"Thank you, dear. Thank you. I shall be feeling better in a couple of jiffs. But I'd be ever so grateful if somebody could bring me a nice cup of—" The expression faded from her plump face and her eyes went vacant. That strange male voice—although now little more than a dying whisper—finished the sentence.

"—Holland gin," it said. ★

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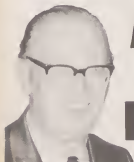
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